

WEDNESDAY POSTERS

PROTEOMICS: QUANTITATION TECHNIQUES, 001 - 034

- WP 001 **Use of iTRAQ and MudPIT to Quantify Synaptic Protein Expression Changes in Post-Synaptic Density Isolated from Individual Mouse Brains;** Zhongping Liao; Yunhu Wan; Sarah Rynarzewski; Stefani Thomas; Austin J. Yang; *Univ of Maryland Baltimore, Baltimore, MD*
- WP 002 **Identification of Potential Kidney Stem Cell Markers using Quantitative Proteomics;** Lorraine Anderson¹; Md Abedin¹; Pratik Jagtap²; Sunayan Bandyopadhyay¹; Chad Myers¹; Raj Kasthuri³; Sandeep Gupta¹; ¹University of Minnesota, Minneapolis, MN; ²Minnesota Supercomp. Inst., Minneapolis, MN; ³University of North Carolina at Chapel Hill, Chapel Hill, NC
- WP 003 **Discovery of New Lysosomal Protein Candidates by iTRAQ 8-Plex Analysis of Rat Liver Gradient Fractions;** Maria Cecilia Della Valle¹; Michel Jadot²; Haiyan Zheng¹; David E. Sleat¹; Peter Lobel¹; ¹CABM/UMDNJ, Piscataway, NJ; ²Facultes Universitaires Notre-Dame de la Paix, Namur, Belgium
- WP 004 **Quantitative Proteomic Analysis Of Mycobacterium Semegmatis by iTRAQ labeling and LC/MALDI-TOF-TOF;** Fa-yun Che; Eleanor Russell Goldman; Edward Nieves; John Chan; Ruth Hogue Angeletti; *Albert Einstein College of Medicine, Bronx, NY*
- WP 005 **Identification of New Markers of Mesenchymal Stem Cell Differentiation with iTRAQ® Technology;** Leeann Higgins; Troy C. Lund; Lorraine Anderson; Amanda J. Kobs; Paul J. Orchard; Jakub Tolar; *University of Minnesota, Minneapolis, MN*
- WP 006 **Is Diversity Library Dynamic Range Leveling a Valid Approach for Quantitative Proteomics?** Lashanda N. Waller; Susana Comte-Walters; Daniel R. Knapp; *Medical University of SC, Charleston, SC*
- WP 007 **Validation of Protein Quantification Strategies for Complex Samples: Comparison of iTRAQ and Multiple Reaction Monitoring (MRM) Quantitation Schemes;** Gregg A. Czerwieniec; Jason M. Held; Sung W. Choi; Birgit Schilling; Simon Melov; Bradford W. Gibson; *Buck Institute for Age Research, Novato, CA*
- WP 008 **Tandem Mass Tags for Selection and Absolute Quantification of Brain Damage Markers in CSF;** Loïc Dayon¹; Natacha Turck¹; Alexander Scherl¹; Stefan Kienle²; Jean-Charles Sanchez¹; ¹Geneva University, Geneva, Switzerland; ²Proteome Sciences R&D GmbH & Co. KG, Frankfurt am Main, Germany
- WP 009 **Candidate Verification of Iron-Sensitive Meningococcal Proteins Using TMT SRM;** Helen Byers¹; James Campbell¹; Karsten Kuhn²; Malcolm Ward¹; Peter Schulz-knappe²; Peter van Ulsen³; Jan Tommassen³; Thorsten Prinz²; ¹Proteome sciences plc, London, UK; ²Proteome Sciences R&D, Frankfurt/Main, Germany; ³University of Utrecht, Utrecht, Holland
- WP 010 **Age Dependent Changes in the Mitochondrial Proteome of APP/PS1 Transgenic Mice;** You-Jun Fu; Shuling Xiong; Mark A Lovell; Bert C Lynn; *University of Kentucky, Lexington, KY*
- WP 011 **Elucidation of Thioredoxin Targeted Protein Networks in Mouse Heart;** Cexiong Fu; Changgong Wu; Tong Liu; Tetsuro Ago; Peiyong Zhai; Junichi Sadoshima; Hong Li; *UMDNJ, Newark, NJ*
- WP 012 **Maturation of Toxins in the Venom Duct of Conus Textile;** Rowan L. Dobson¹; Mike Collodoro¹; Nicolas Gilles²; Stéphanie Kirsch¹; Edwin De Pauw¹; Loic Quinton¹; ¹Liege University, Liege, Belgium; ²CEA Saclay, Gif sur Yvette, France
- WP 013 **Quantitative Proteomic Analysis in Transformed Astrocytes Using Spectral Counting and SILAC Methods;** Kiyonaga Fujii¹; Ken Sasai²; Taichi Kimura²; Shinya Tanaka²; Fuyuhiko Inagaki¹; ¹Hokkaido University, Sapporo, Japan; ²Hokkaido University Graduate School of Medicine, Sapporo, Japan
- WP 014 **Comparative Analyses of Proteins from Two Distinct Bacterial Populations Using SILAC;** Deborah Post¹; Margaret Ketterer²; Jason Johnston²; Michael Apicella²; Bradford W. Gibson¹; ¹Buck Institute, Novato, CA; ²The University of Iowa, Iowa City, IA
- WP 015 **Evaluating the Protein Stoichiometry within Protein-RNA Complexes by Multiple Reaction Monitoring in Comparison to MS Standard Methods;** Carla Schmidt¹; Michael Grote³; Christof Lenz²; Reinhard Lührmann³; Henning Urlaub¹; ¹MPI for Biophysical Chemistry, Bioanalytical MS, Göttingen, Germany; ²PSM Support, Applied Biosystems, Darmstadt, Germany; ³MPI for Biophysical Chemistry, Cell Biochemistry, Göttingen, Germany
- WP 016 **A Comparison of Analytical Approaches to the Detection and Quantitation of Proteins in Complex Biological Matrices;** Anita Izrael-Tomasevic; Lilian Phu; Qui Phung; Jennie Lill; David Arnott; *Genentech, Inc., South San Francisco, CA*
- WP 017 **Quantitative Mitochondrial Proteome of Pancreatic INS-1 β Cells Stimulated with Prolonged High Glucose Using SILAC;** Xiulan Chen; Ziyu Cui; Junjie Hou; Zhensheng Xie; Peng Xue; Jing Li; Peng Wu; Linan Shi; Tanxi Cai; Fuquan Yang; *Institute of Biophysics, CAS, Beijing, China*
- WP 018 **Protein Profiles of Cisplatin Treated CEM Cells - An Interesting Insight from Three Different Techniques;** Petr Novak^{1,5}; Petr Pompach^{1,5}; Petr Man¹; Martin Strohalm^{1,2}; Vladimir Havlicek^{1,4}; Jirina Martinkova³; Hana Kovarova³; Petr Dzubak⁴; Marian Hajduch⁴; ¹Institute of Microbiology, Prague 4, Czech Republic; ²Institute of Chemical Technology, Prague, Czech Republic; ³Institute of Animal Physiology and Genetics, Libechev, Czech Republic; ⁴Palacky University, Olomouc, Czech Republic; ⁵Charles University, Prague, Czech Republic
- WP 019 **Proteome-Wide Quantitative Mass Spectrometry of Astrocyte Protein Secretion;** Todd M. Greco; Lynn A. Spruce; Adrian Mak; Steven H. Seeholzer; Harry Ischiropoulos; *Children's Hospital of Philadelphia, Philadelphia, PA*
- WP 020 **Can Quantitative Proteomics Predict the Effects of Autophagy Inhibition on Mitochondrial Function?** Rongxiao Sa; Marian Navratil; Xin Xu; Edgar A. Arriaga; *University of Minnesota, Minneapolis, MN*
- WP 021 **Stoichiometry and Absolute Quantification of Ribosomal Proteins by Mass Spectrometry using QconCAT Technology;** Zubida Al-Majdoub; Simon J. Gaskell; Jill Barber; *University of Manchester, Manchester, UK*
- WP 022 **Determination of Clp Protease Complex Composition in Arabidopsis Thaliana Chloroplasts by Quantitative Mass Spectrometry;** Paul Dominic B. Olinares¹; Boris Zybailov¹; Qi Sun²; Klaas J. Van Wijk¹; ¹Plant Biology, Cornell University, Ithaca, NY; ²Computational Biology Unit, Cornell University, Ithaca, NY

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- WP 023 **Circadian Differences of Photoreceptor Outer Segment Proteome Observed by Proteolytic ¹⁸O Labeling**; Dagmar Hajkova¹; Chao Yuan²; Masaru Miyagi³; ¹Case Western Reserve Univ, Cleveland, OH; ²Case Western Reserve Univ., Cleveland, OH; ³Case Western Reserve Univ., Cleveland, OH
- WP 024 **¹⁸O Labeling and Mass Spectrometry as a Simple Tool for High Confidence Protein-Protein Interaction Analysis**; Karel Bezstarosti; Alireza Ghamari; Frank Grosveld; Jeroen Demmers; Erasmus Medical Center, Rotterdam, Netherlands
- WP 025 **Quantitative Proteomic Elucidation of the Core AAA+ Vacuolar Protein Sorting 4B ATPase Protein Interaction Complex**; Stefani N. Thomas¹; Yunhu Wan¹; Zhongping Liao¹; David K. Ann²; Phyllis I. Hanson³; Austin J. Yang¹; ¹Univ of Maryland Baltimore, Baltimore, MD; ²City of Hope, Duarte, CA; ³Washington University, St. Louis, MO
- WP 026 **Discovery of Disease-Related Proteins in the Min Mouse Model for Colorectal Cancer via ¹⁵N Metabolic Labeling and Microarray Analysis**; Edward L. Huttlin^{1,2}; Xiaodi Chen¹; Gregory Barrett-Wilt¹; Richard Halberg¹; Adrian D. Hegeman³; Melanie M. Ivancic¹; Michael A. Newton¹; Amy C. Harms¹; William F. Dove¹; Michael R. Sussman¹; ¹University of Wisconsin, Madison, WI; ²Harvard Medical School, Boston, MA; ³University of Minnesota, Saint Paul, MN
- WP 027 **The Role of Nascent Peptide-Ribosome Interactions in Gene Regulation Using Quantitative Mass Spectrometry with ¹⁵N-Stable Isotope Labeling**; Blanca Martínez-Garriga; Hua Xu; Krishna Kannan; Alexander Mankin; Univ Illinois at Chicago, Chicago, IL
- WP 028 **Quantification and Proteotyping of α -1-Antitrypsin Deficiency by a Peptide MRM Assay**; Linda M. Benson; Yuhong Chen; Melissa R. Snyder; Jerry A. Katzmann; H. Robert Bergen, III; Mayo Clinic, Rochester, MN
- WP 029 **Dynamic Changes in the Proteome of the Postnatally Developing Mouse Brain: A Combination of 2-D DIGE and Isobaric Mass Tagging**; Babs Van de Plas¹; Martijn Pinkse²; Gert Van den Bergh¹; Stefan Clerens^{1,3}; Peter D. Verhaert²; Lutgarde Arckens¹; ¹K.U.Leuven, Leuven, Belgium; ²Delft University of Technology, Delft, Netherlands; ³AgResearch, Christchurch, New Zealand
- WP 030 **Proteomic Analysis of the *Helicobacter pylori* ArsRS regulon by DIGE/MS**; John T. Loh; David B. Friedman; Timothy L. Cover; Vanderbilt University School of Medicine, Nashville, TN
- WP 031 **Quantitative Proteomics to Identify MicroRNA Target Proteins in Human Neoplasias**; Christopher Lößner; Jan Meier; Uwe Warnken; Peter Lichter; Armin Pscherer; Martina Schnölzer; German Cancer Research Center, Heidelberg, Germany
- WP 032 **Identification of Biomarkers to Estrogen Exposure Using MCF-7/BOS Cell Line Exposed to 17 β -Estradiol and Phytoestrogens**; Mike Collodoro; Pascale Lemaire; Virginie Bertrand; Rowan L. Dobson; Gabriel Mazzucchelli; Joelle Widart; Edwin De Pauw; Marie-claire Gillet; University of Liège, Liège, Belgium
- WP 033 **Label-Free Proteomics with MS^E: Applications to Protein Functional Biology and the Biology of Adult Stem Cells**; Lewis M. Brown; Grégory Boël; Nidhi Gangadhar; Brent R. Stockwell; Stuart Firestein; John F. Hunt; Columbia University, New York, NY
- WP 034 **Comprehensive Overview on Hyperosmotic Conditions in *Corynebacterium Glutamicum***; Benjamin Fränzel; Dirk Wolters; University Bochum, Bochum, Germany

BIOINFORMATICS, 035 - 064

- WP 035 **Babel Fish: Interconversion of MS File Formats and Standards**; Paul Gershon¹; Panagiotis T. Papoulis²; Bryan Smith²; Philip Andrews²; ¹UC-Irvine, Irvine, CA; ²University of Michigan, Ann Arbor, Michigan
- WP 036 **New Functionality for the Trans-Proteomic Pipeline: Tools for the Analysis of Proteomics Data**; Luis Mendoza¹; David Shteynberg¹; Natalie Tasman¹; Brian S Pratt²; Jimmy K. Eng³; Henry H. Lam⁴; Alexey Nesvizhskii⁵; Eric W. Deutsch¹; Ruedi Aebersold^{1,6}; ¹Institute for Systems Biology, Seattle, WA; ²Insilicos LLC, Seattle, WA; ³University of Washington, Seattle, WA; ⁴Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong; ⁵University of Michigan, Ann Arbor, MI; ⁶Swiss Federal Institute of Technology, Zurich, Switzerland
- WP 037 **Peptidome: NCBI Peptide Data Resource**; Douglas J. Slotta; Tanya Barrett; Ron Edgar; NIH/NLM/NCBI, Bethesda,
- WP 038 **Annotation and Project Management Resource Integrated with the ProteomeCommons.org Tranche Repository**; James Hill¹; Bryan Smith¹; Mark Gjukich¹; Panagiotis G Papoulis¹; Jayson Falkner²; Philip Andrews¹; ¹University of Michigan, Ann Arbor, MI; ²SOSI, Portland, OR
- WP 039 **Custom Mass-Informatics Algorithms and Workflows with MultiplierZ**; Manor Askenazi^{1,2}; Jignesh Parikh²; Shaojuan Li²; Jarrod Marto²; ¹Hebrew University, Jerusalem, Israel; ²Dana-Farber Cancer Institute, Boston, MA
- WP 040 **Yale Protein Expression Database (YPED) – Tools to Support Targeted Proteomic Analysis**; Christopher Colangelo; Tom Abbott; Mark Shifman; Yale University, New Haven, CT
- WP 041 **Scalable Cyberinfrastructure for Proteomics Research**; Claudiu Farcas; To-Ju Huang; Roy Liu; Vineet Bafna; Ingolf Krueger; Pavel Pevzner; Nuno Bandeira; University of California, San Diego, La Jolla, CA
- WP 042 **DAMAGE - Boosting Peptide MSMS Identification Computing Times Using Nvidia Graphic Cards with a GPGPU Engine**; Ivan Topolsky¹; Olivier Evalet²; Jacques Colinge³; Anne Niknejad²; Pierre-Alain Binz^{2,4}; Alexandre Masselot²; ¹Geneva University, Geneva, Switzerland; ²Geneva Bioinformatics (GeneBio), Geneva, Switzerland; ³CeMM, Vienna, Austria; ⁴Swiss Institute of Bioinformatics, Geneva, Switzerland
- WP 043 **Using Peptide and Spectrum Indexing To Speed Up Mass Spectrometry Based Protein Identification**; You Li; Leheng Wang; Hao Chi; Haipeng Wang; Yan Fu; Zuofei Yuan; Ruixiang Sun; Simin He; Institute of Computing Technology and Key Lab of I, Beijing, china, China
- WP 044 **Analytical System of LC/MS Proteomics Data and Application**; Xinjian Yan; Dmitrii Tchekhovskoi; Bhaskar Godugu; Stephen E. Stein; NIST, Gaithersburg, MD
- WP 045 **Integrated Informatics Solution for Streamlining Biopharmaceutical Data Management and Reporting**; Fredrick W. Schmidt; Chris L Stumpf; Waters Corporation, Milford, MA

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- WP 046 **Improving the Sensitivity of Peptide Identification from Tandem Mass Spectra using Meta-Search, Grid-Computing, and Machine-Learning**; Nathan J. Edwards; *Georgetown University Medical Center, Washington, DC*
- WP 047 **SPIRE: Systematic Protein Identification and Relative Expression Analysis Resource for High-Throughput Proteomics**; Roger Higdon¹; Gregory Hather¹; Andrew T Bauman¹; Brent Louie¹; Bill Broomall¹; Simon Fortenly¹; Natali Kolker¹; Gerald van Belle²; Eugene Kolker¹; ¹*Seattle Children's Research Institute, Seattle, WA*; ²*University of Washington, Seattle, WA*
- WP 048 **High-Throughput Autonomous Proteomic Pipeline**; Kebing Yu; Arthur Salomon; *Brown University, Providence, RI*
- WP 049 **STRAP: Open-Source Software for Protein Annotation and Data Visualization**; Vivek N. Bhatia; David H. Perlman; Catherine E. Costello; Mark E. McComb; *Boston University School of Medicine, Boston, MA*
- WP 050 **A New Comprehensive Software Tool for Proteomics Data Generated by Less Specific Enzymes**; Malte Schürken; Michael Karas; *JW Goethe Univ. of Frankfurt, Frankfurt Am Main, Germany*
- WP 051 **Invigorating the Mass Spectrometer: Software Solution for Tandem MS**; Anuj Shah; Andrei Liyu; Yan Shi; Navdeep Jaitly; Ashoka D. Polpitiya; Joshua Adkins; Adam Wynne; Mikhail Belov; Ian Gorton; Gordon Anderson; Richard D. Smith; *Pacific Northwest National Laboratory, West Richland, WA*
- WP 052 **IDSieve: An Automated Algorithm for Peptide pI Filtering of MS/MS Data to Lower False Positive and False Negative Identifications**; Nikhil Garge; Benjamin J. Cargile; Jonathan L. Bundy; Maureen K. Bunker; James L. Stephenson Jr; *Research Triangle Institute, Durham, NC*
- WP 053 **Computational MS/MS Spectra Preprocessing – a Free Lunch**; Bernhard Y. Renard^{1,2}; Flavio Monigatti³; Marc Kirchner^{1,3}; Alexander R. Ivanov⁴; Juri Rappsilber⁵; Judith A. J. Steen³; Fred A. Hamprecht^{1,2}; Hanno Steen³; ¹*University of Heidelberg, Heidelberg, Germany*; ²*Children's Hospital Boston, Boston, MA*; ³*Harvard Medical School/Children's Hospital Boston, Boston, MA*; ⁴*Harvard University HSPH, Boston, MA*; ⁵*Wellcome Trust Centre for Cell Biology, Edinburgh, UK*
- WP 054 **Consolidated Statistical Approach to Identify Cancer Biomarkers in Humoral Immune Response Study**; Huy Vuong; Evelyn H. Kim; Chen Li; Tasneem Patwa; Manoj Pal; Mack Ruffin; Diane M. Simeone; David M. Lubman; *University of Michigan, Ann Arbor, MI*
- WP 055 **Evaluation of Clustering Algorithms for Protein Complex and Protein Interaction Network Assembly**; Mihaela Sardi; Laurence Florens; Michael Washburn; *Stowers Institute for Medical Research, Kansas City, MO*
- WP 056 **Express Biological Pathway Analysis of Mass Spectrometry Based Proteomics Datasets**; Alexandre Podtelejnikov; Christian Ravnsborg Ingrell; Morten Bern; Ole Vorm; *Proxeon A/S, Odense, Denmark*
- WP 057 **Development of Methods and Tools for Performing Protein Set Expression Analysis (PSEA)**; Roger Higdon¹; Gregory Hather¹; Andrew T Bauman¹; Brent Louie¹; Gerald van Belle²; Simon Fortenly¹; Natali Kolker¹; Bill Broomall¹; Eugene Kolker¹; ¹*Seattle Children's Research Institute, Seattle, WA*; ²*University of Washington, Washington, Seattle, WA*
- WP 058 **Molecular Networks Derived from Proteomic Analysis of Oral Epithelial Cells from HIV Patients Show High Correspondence with Known HIV-Interacting Proteins**; Gaurav S.J.B. Rana; Elizabeth H. Yohannes; Santosh Gosh; Bin Jiang; Thomas McCormick; Aaron Weinberg; Mark Chance; *Case Western Reserve University, Cleveland, OH*
- WP 059 **Simultaneous Multiple Alignment for LC/MS Peak Lists**; Bjoern Voss¹; Bernhard Y. Renard¹; Anna Kreshuk¹; Michael Hanselmann¹; Ullrich Koethe¹; Hanno Steen²; Judith A. J. Steen²; Marc Kirchner^{1,3}; Fred A. Hamprecht¹; ¹*University of Heidelberg, Heidelberg, Germany*; ²*Harvard Medical School/Children's Hospital Boston, Boston, MA*; ³*Children's Hospital Boston / Harvard Medical, Boston, MA*
- WP 060 **A Peak Alignment Algorithm for Two-Dimensional Gas Chromatography/Time-of-Flight Mass Spectrometry Based Metabolomics**; Bing Wang^{1,2}; Aiqin Fang¹; Charles Buck³; Xiaodong Huang³; Xiang Zhang¹; ¹*University of Louisville, Louisville, KY*; ²*Anhui University of Technology, Ma An Shan, China*; ³*Purdue University, West Lafayette, IN*
- WP 061 **Improving Untargeted Differential Analysis of Mass Spectrometric Data by Recursive Feature Extraction**; Norton Kitagawa; Steven M. Fischer; Theodore Sana; David Peterson; Ed Darland; Xiangdong Li; *Agilent Technologies, Inc., Santa Clara, CA*
- WP 062 **Noise Analysis on Liquid Chromatography Mass Spectrometry Data on Elution Time Profile Dimension**; Elias Gonzalez; Michelle Zhang; *University of Texas at San Antonio, Universal City, TX*
- WP 063 **The Comparison of Peak-Detection Algorithms for LC/MS**; Jian Cui¹; gonzalez Elias¹; William Haskins²; Huang Huang¹; Jianqiu Zhang¹; ¹*Dept. of ECE, University of Texas at San Antonio, San Antonio, TX*; ²*University of Texas, San Antonio, TX*
- WP 064 **Robust Statistical Reconstruction of Protein Profiles in Mass Spectrometry**; Pierre P. Grangeat¹; Grégory Strubel¹; Jean-François Giovannelli²; Virginie Brun³; Laurent Gerfault¹; Caroline Paulus¹; Alain Dupuis³; Jérôme Garin³; ¹*CEA, LETI, MINATEC, Grenoble, France*; ²*Université de Bordeaux, IMS/LAPS, Talence, France*; ³*CEA, INSERM, UJF, U880, iRTSV, Grenoble, France*

PROTEOMICS: BIOMARKER DISCOVERY, 065 - 095

- WP 065 **Testing for Differences between Complex Samples in Proteomics Datasets**; Brian C. Searle¹; David Tabb²; Jayson A. Falkner³; Jeffrey A. Kowalak⁴; Karen Meyer-arendt⁵; Lennart Martens⁶; Manor Askenazi⁷; Paul Rudnick⁸; Sean L. Seymour⁹; William S. Lane¹⁰; ¹*Proteome Software Inc., Portland, OR*; ²*Vanderbilt University, Nashville, TN*; ³*Single Organism Software Inc, Beaverton, Or, OR*; ⁴*NIH, Bethesda, MD*; ⁵*University of Colorado, Boulder, CO*; ⁶*European Bioinformatics Institute, Cambridge, UK*; ⁷*Dana-Farber Cancer Institute and Hebrew University, Boston, MA*; ⁸*NIH, Gaithersburg, MD*; ⁹*Applied Biosystems, Foster City, CA*; ¹⁰*Harvard University, Cambridge, MA*
- WP 066 **Identification of Intracellular Modified Proteins by the Lipid Peroxidation Aldehyde DODE**; Peter G. Slade; Michelle Williams; Viral Brahmabhatt; John S. Wishnok; Steve Tannenbaum; *Massachusetts Institute of Technology, Cambridge, MA*

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- WP 067 **Withdrawn**
- WP 068 **Identification of Candidate Biomarkers from Integrated Proteomic Analysis of Human Cancer Cells and Plasma from an Ovarian Cancer Mouse Model**; Sharon J. Pitteri¹; Lellean JeBailey²; Vitor M. Faca¹; Melissa A. Silva¹; Renee C. Ireton¹; Jason D. Thorpe¹; Marc B. Horton²; Hong Wang¹; Liese Pruitt²; Qing Zhang¹; Kuang H. Cheng²; Nicole Urban¹; Daniela M. Dinulescu²; Samir M. Hanash¹; ¹*Fred Hutchinson Cancer Research Center, Seattle, WA*; ²*Harvard Medical School, Boston, MA*
- WP 069 **Artifact-Free Quantitation of Free and Protein-Bound Nitrotyrosine and Chlorotyrosine in Human Serum by NICI GC/MS**; Yu Zeng; Kari E. Schlicht; Viral Brahmabhatt; Peter G. Slade; Lizz Liffbrig; John S. Wishnok; Steven R. Tennenbaum; *MIT, Cambridge, MA*
- WP 070 **Comparison Of Label-Free, ¹⁸O/¹⁶O And Glycopeptide Enrichment For Differential Proteomics Analysis Of Human Plasma After Branched-Chain Amino Acid Infusion**; Kenneth L. Johnson^{1,2}; Carrie Holtz-Heppelmann^{1,2}; Cristine Charlesworth^{1,2}; Michael W. Holmes^{1,2}; Jeanette Eckel-Passow^{1,3}; Terry Therneau^{1,3}; K Sreekumaran Nair^{1,4}; H. Robert Bergen, III^{1,2}; ¹*Mayo Clinic, Rochester, MN*; ²*Mayo Proteomics Research Center, Rochester, MN*; ³*Division of Biomedical Statistics and Informatics, Rochester, MN*; ⁴*Endocrinology, Rochester, MN*
- WP 071 **Mass Spectrometry-Based Analysis of Cerebrospinal Fluid Peptidome and Proteome for Biomarker Discovery in Alexander Disease**; Robert Cunningham¹; Xin Wei²; Paige Jany³; Albee Messing³; Lingjun Li⁴; ¹*Univ. of Wisconsin-Madison, Madison, WI*; ²*Univ. of Wisconsin-Madison, Madison, WI*; ³*Waisman Center, University of Wisconsin-Madison, Madison, WI*; ⁴*University of Wisconsin, Madison, WI*
- WP 072 **Proteomic Analysis of Gynecological Mucus Samples Provides Insight into the Early Detection of Endometrial Cancer**; Guangyu Zhang¹; Michael Finan¹; Rodney Rocconi¹; Madhuri Mulekar²; Lewis K. Pannell¹; ¹*Mitchell Cancer Institute, Mobile, AL*; ²*University of South Alabama, Mobile, AL*
- WP 073 **Murine Colorectal Tumor Tissue Analysis by 2D-LC/MS/MS**; Wenhong Zhu; *The Burnham Institute, La Jolla, CA*
- WP 074 **Discovery of Mitochondrial Protein and Phosphoprotein Biomarkers of Atrial Fibrillation**; Mark M. Ross¹; Maryam Goudarzi¹; Weidong Zhou¹; Amy VanMeter¹; Lance Liotta¹; Emanuel Petricoin¹; Lisa Martin²; Niv Ad²; ¹*George Mason University, Manassas, VA*; ²*Inova Heart & Vascular Institute, Falls Church, VA*
- WP 075 **Quantitative and Qualitative Analysis of Urinary Biomarkers by Selected Reaction Monitoring**; Nathalie Selevsek¹; Mariette Matondo¹; Marta Sánchez-Carbayo²; Ruedi Aebersold¹; Bruno Doman¹; ¹*ETH Zurich, Zurich, Switzerland*; ²*Centro Nacional de Investigaciones Oncológicas, Madrid, Spain*
- WP 076 **Proteomics Analysis of Stem Cell Secretome**; Hsin-Chieh Wu¹; Ming-Hui Yang²; Shiang-Bin Jong²; Yu-Chang Tyan¹; ¹*Kaohsiung Medical University, Kaohsiung, Taiwan*; ²*National Sun Yat-sen University, Kaohsiung, Taiwan*
- WP 077 **Identification of Glycoprotein Biomarkers in Prostate Cancer by Quantitative Proteomics**; Vivekananda Shetty; Thamby Gomathinayagam; Punit Shah; Zacharie Nickens; Ramila Philip; *Immunotope, Inc., Doylestown, PA*
- WP 078 **A Quantitative Proteomic Approach for the Discovery of Prion Disease Biomarkers**; Xin Wei; Allen Herbst; Judd Aiken; Lingjun Li; *Univ. of Wisconsin-Madison, Madison, WI*
- WP 079 **Identification of Amyloid Beta Peptides in Cerebrospinal Fluid Using Isotope Dilution Liquid Chromatography and Electrospray Ionization Tandem Mass Spectrometry**; Alfred N. Fonteh¹; Rachel D. Fisher¹; John Rush²; Michael G. Harrington¹; ¹*Huntington Med. Res. Insts., Pasadena, CA*; ²*Cell Signaling Technology, Beverly, MA*
- WP 080 **SILAC-Labeled Cell/Tissue Lysates as a Generic Source of Proteotypic Peptides in Multiple Reaction Monitoring Analyses**; Stephan Jung¹; Stuart Pengelley¹; Karsten Krug¹; Ana Velic²; Boris Macek¹; ¹*Proteome Center Tubingen, Tubingen, Germany*; ²*Max-Planck Institute for Biochemistry, Martinsried, Germany*
- WP 081 **Proteomic analysis of Sera from Prostate Cancer Patients with MALDI-TOF-MS**; Corinna Henkel¹; Joachim Grosse²; Gerhard Jakse²; Nadine Reulen¹; Axel Heidenreich²; Ruth Knuechel¹; Kristina Schwamborn^{1,3}; ¹*Pathology, RWTH Aachen University Hospital, Aachen, Germany*; ²*Urology, RWTH Aachen University Hospital, Aachen, Germany*; ³*Mass Spectrometry Research Center, Biochemistry, Nashville, TN*
- WP 082 **Comprehensive Proteomics Analysis of Human Placental BeWo Cell Model for Preterm Birth Biomarker Discovery**; Vineet Sangar¹; Sumit Shah¹; Samuel I Parry¹; Ian A. Blair²; ¹*University of Pennsylvania, Philadelphia, PA*; ²*Univ. of Penn/SOM/Pharmacol, Philadelphia, PA*
- WP 083 **A Quantitative Proteomics Method for the Measurement of Immune Responses in HIV Resistant Women**; Derek R Stein¹; Terry B Ball^{1,2}; Garrett Westmacott²; Keding Cheng²; Francis A Plummer²; ¹*University of Manitoba, Winnipeg, Canada*; ²*Public Health Agency of Canada, Winnipeg, Canada*
- WP 084 **Identification of Biomarkers in Cochlear Pathogenesis in the Usher Syndrome 1F Mouse Model**; Giridharan Gokulrangan¹; Daniel Chen²; Sunitha Shyam¹; Rebecca Levinson¹; Nam Kim²; Mark Chance¹; Kumar Alagramam²; ¹*Case Center for Proteomics, Cleveland, OH*; ²*Otolaryngology, Case Western Reserve University, Cleveland, OH*
- WP 085 **Identification of Tumor-Specific Proteins in Plasma**; Yuan Tian¹; Karen S. Kelly-Spratt²; Christopher J. Kemp²; Hui Zhang¹; ¹*Johns Hopkins University, Baltimore, MD*; ²*Fred Hutchinson Cancer Research Center, Seattle, WA*
- WP 086 **Elucidation of Potential Diagnostic Biomarkers from Archival Fibrohistiocytic Tumor Tissue**; Brian L. Hood^{1,2}; Arash Radfar³; Adar T. Berghoff⁴; Mai Sun^{1,2}; Uma Rao⁴; Thomas P. Conrads^{1,2}; ¹*University of Pittsburgh, Pittsburgh, PA*; ²*The University of Pittsburgh Cancer Institute, Pittsburgh, PA*; ³*Department of Dermatopathology, Pittsburgh, PA*; ⁴*Department of Pathology, Pittsburgh, PA*
- WP 087 **Halogenated-Peptides as Internal Standards (H-PINS) for Liquid Chromatography Mass Spectrometry**; Hamid Mirzaei¹; Mi-Youn Bruisnak¹; Lukas N. Mueller¹; Simon Letarte¹; Julian D Watts¹; Ruedi Aebersold^{1,2}; ¹*Institute for Systems Biology, Seattle, WA*; ²*Institute of Molecular Systems Biology, ETH Zurich, Switzerland*

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- WP 088 **Comparison of High Abundance Protein Depletion Techniques for Biomarker Discovery with Two Proteomics Workflows;** Tim Wehr¹; Chengjun Sun¹; Lei Li¹; Steve Freeby¹; Ning Liu¹; John Walker¹; Aran Paulus¹; Katrina Academia¹; Chris Sutton²; ¹Bio-Rad Labs, Hercules, CA; ²University of Bradford, Bradford, UK
- WP 089 **Use of Pre-Spotted ProteinChip Arrays for Qualification of a MALDI TOF-TOF Instrument in Linear, Reflectron, and MS/MS Modes;** Diane McCarthy; Vanitha Thulasiraman; Amanda Bulman; Enrique Dalmasso; Fiona Plows; Bio-Rad Laboratories, Inc., Hercules, CA
- WP 090 **Oxythiamine Specifically Inhibits Heat Shock Protein 27 (Hsp27) Phosphorylation and Cell Proliferation in MIA Pancreatic Cancer Cells;** Rui Cao¹; Hengwei Zhang¹; W. Paul Lee²; Caishu Deng¹; Yingchun Zhao¹; Qingmei Xie¹; Joan Lappe¹; Robert Recker¹; Songping Liang³; Gary Guishan Xiao¹; ¹Creighton University, Omaha, NE; ²Harbor - UCLA Medical Center, Torrance, CA; ³College of Life Science, Hunan Normal University, Changsha, China
- WP 091 **Diagnostic Feature Detection in 2-200 kDa TOF-MS Spectra of Leukemia Serum Proteins;** Maureen B. Tracy; Dariya Malyarenko; Karl W. Kuschner; Eugene R. Tracy; William E. Cooke; Dennis Manos; College of William and Mary, Williamsburg, VA
- WP 092 **Proteomic Analysis of Interstitial Fluid from Head and Neck Tumors;** Matthew Stone; Rick M Odland; Tim Griffin; University of Minnesota, Minneapolis, MN
- WP 093 **Discovery of Protein Markers for Lung Cancer by Label Free Mass Spectrometry and Validation in Serum;** Jenny L. Heidbrink¹; Tao He²; Aiqun Li¹; Yeoun Jin Kim³; William FitzHugh⁴; Elizabeth Joseloff⁵; Gulshan Dhariwal¹; Sudeepta Aggarwal¹; Charles E. Birse¹; Steven M. Ruben¹; ¹Celera, Rockville, MD; ²Wyeth, Cambridge, MA; ³Bristol-Myers Squibb, Princeton, NJ; ⁴AM Solutions, Reston, VA; ⁵Cystic Fibrosis Foundation, Bethesda, MD
- WP 094 **Secretome Profiling in Pancreatic Cancer Cells in Response to Transketolase Inhibitor Oxythiamine Using 15N Amino Acid Labeling and Serum-Depleted Medium;** Yingchun Zhao¹; Jing Xiao¹; W. Paul Lee²; Rui Cao¹; Robert Recker¹; Vay Liang Go²; Gary Guishan Xiao¹; ¹Creighton University, Omaha, NE; ²Harbor - UCLA Medical Center, Torrance, CA
- WP 095 **Identification of Diagnostic Serum Biomarkers for Chagas Disease in Asymptomatic Subjects;** Momara Ndao; Brian J. Ward; Christine Straccini; Bernard F. Gibbs; McGill University, Montreal, Canada
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- WP 096 **Derivatization of Amino Acids in Human Plasma for Quantitation by Comprehensive Two Dimensional Gas Chromatography Time of Flight Mass Spectrometry;** Elizabeth A. McGaw; Gauthier Eppe; Mark S. Lowenthal; Nathan G. Dodder; Karen W. Phinney; NIST, Gaithersburg, MD
- WP 097 **High Resolution, High Accuracy Measurement and Fragmentation Analysis for Metabolite Identification in Broccoli Samples – Meta-Phor Research Initiative Results;** Helmut Muenster¹; Eugen Damoc¹; Catharina Crone¹; Thomas Moehring¹; Martin Hornshaw²; Madalina Oppermann^{1,2}; ¹Thermo Fisher Scientific (Bremen) GmbH, Bremen, GERMANY; ²Thermo Fisher Scientific, Hemel Hempstead, UK
- WP 098 **Investigative Renal Toxicity Study in Mice Using MS-Based Metabolomics;** Joanna R. Pols; Anthony Srnka; Swapan K. Chowdhury; Kevin B. Alton; Schering-Plough Research Institute, Kenilworth, NJ
- WP 099 **Metal Chelating Agent Enhances Polar Anionic Metabolome Analysis in Nano-LC/MS;** Khin Than Myint^{1,2}; Yoshiya Oda^{1,2}; ¹Eisai Co, Tsukuba, Japan; ²CREST, Japan Science and Technology, Saitama, Japan
- WP 100 **Characterizing Free Radical-Induced Indole Binding in Plasma Proteins of Huntington Disease (HD) Patients Using Liquid Chromatography/Electrochemical Array (LCECA) and LCMSⁿ;** Erika N. Ebbel¹; Lei Wang²; Wayne R. Matson³; Samantha Matson³; Swati Sharma³; Giuseppe Infusini¹; Mikhail B. Bogdanov²; Steven Hersch⁴; Catherine E. Costello¹; ¹Boston University School of Medicine, Boston, MA; ²Weill Medical College of Cornell, New York, NY; ³Bedford VA Medical Center, Bedford, MA; ⁴Mass. General Hospital, Harvard Medical School, Charlestown, MA
- WP 101 **Absolute Quantification of Amino Acids in Plasma Using Stable Isotope Dilution LC-MS/MS – Application to a Reference Material for Metabolomics;** Mark S. Lowenthal; Gauthier Eppe; Elizabeth A. McGaw; Nathan G. Dodder; Karen W. Phinney; National Institute of Standards and Technology, Gaithersburg, MD
- WP 102 **Characterizing Active Metabolism in Quiescent Human Fibroblasts;** Johanna M Scarino; Hilary A Collier; Joshua D Rabinowitz; Aster Legesse-Miller; Bryson Bennett; Xiao-Jiang Feng; Princeton University, Princeton, NJ
- WP 103 **GCxGC-TOFMS Data Interpretation of Metabolic Biomarkers from Diabetic and Nondiabetic Urine Utilizing Fisher Ratios Prior to Multivariate Analysis;** John R. Heim; Scott Pugh; Mark Libardoni; LECO Corporation, St. Joseph, MI
- WP 104 **Global Quantitation of Carbonyl Metabolites in Human Urine and Plasma Using ¹²C-/¹³C-Dansylhydrazine Labeling and Nanole/FT-ICR-MS;** Margot R. Dawe; Kevin Guo; Liang Li; University of Alberta, Edmonton, Canada
- WP 105 **Optimization of Mass Accuracy, Spectral Accuracy, and Resolution in Metabolite Identification Using LTQ-FT Ultra Hybrid Mass Spectrometer;** Wei Zou¹; Yongdong Wang²; Ming Gu²; Vladimir Tolstikov¹; ¹University of California, Genome Center, Davis, CA; ²Cerno Bioscience, Yardley, PA
- WP 106 **Direct Single Organelle Metabolomics in a Live Single RBL-2H3 Cell by Video-Mass Spectrometry;** Hajime Mizuno; Naohiro Tsuyama; Takanori Harada; Tsutomu Masujima; Hiroshima Univ. BioMed., Hiroshima, JAPAN
- WP 107 **Comprehensive Analysis of Urinary Acylglycines Using Ultra-Performance Liquid Chromatography Coupled with a Hybrid Linear Ion Trap Mass Spectrometer;** Avalyn Lewis; Liang Li; University of Alberta, Edmonton, Canada
- WP 108 **Phosphate-Containing Metabolite Enrichment Using TiO₂ and ZrO₂ Microcolumns;** Hyun Ju Yoo; Kristina Hakansson; University of Michigan, Ann Arbor, MI
- WP 109 **A Metabolomics Study of a Breast Cancer Rat Model with Compound Identification Using an Accurate Mass Retention Time Database;** Steven M. Fischer; Theodore Sana; Agilent Technologies, Santa Clara, CA

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- WP 110 **Biomonitoring of 2-Amino-1-Methyl-6-Phenylimidazo[4,5-b]Pyridine (PhIP) and Its Carcinogenic Metabolites in Urine;** Robert J. Turesky¹; Jean-Marie Fede¹; Nigel J. Gooderham²; ¹Wadsworth Center, Albany, NY; ²Imperial College London, London, UK
- WP 111 **Uncovering the Hidden Biology of 5'-Methylthioadenosine in Cancer Research Using Mass Spectrometry;** Yibai Chen; Baiqing Tang; Warren Kruger; Anthony Yeung; *Fox Chase Cancer Center, Philadelphia, PA*
- WP 112 **Assessing the Reproducibility of Direct Infusion Mass Spectrometric Analyses using Thermometer Ions;** Paolo Lecchi; Jinghua Zhao; Wesley S. Wiggins; Tzong-Hao Chen; Greg P. Bertenshaw; Ping F. Yip; Brian C. Mansfield; John M. Peltier; *Correlogic Systems, Inc., Rockville, MD*
- WP 113 **An Optimized UPLC-QToF-MS Method for Plant Metabolomics and Secondary Metabolism;** David V. Huhman; Lloyd W. Sumner; *The Samuel Roberts Noble Foundation, Inc., Ardmore, OK*
- WP 114 **Metabolomics Analysis of *Saccharomyces Cerevisiae* by LC/MS-TOF Using a Robust Milling Protocol for Extraction;** Stefan Jenkins; Sally Webb; Theodore R. Sana; *Agilent Technologies, Santa Clara, CA*
- WP 115 **Predicting Human Developmental Toxicity Using Human Embryonic Stem Cells and Metabolomics;** Paul R. West; April M. Weir; Alan Smith; Sudeepa Bhattacharyya; Gabriela G. Cezar; *Stemina Biomarker Discovery, Madison, WI*
- WP 116 **Electrospray Ionization and Collision Induced Dissociation of tert-Butyldimethylsilyl Derivatives of Endogenous Metabolites from Human Cancer Cells;** Ruth N. Udey; Chrysoula Vasileiou; Babak Borhan; A. Daniel Jones; *Michigan State University, East Lansing, MI*
- WP 117 **Measuring Cell to Cell Differences in the Metabolome of Individual Neurons Using Capillary Electrophoresis with Electrospray Ionization Mass Spectrometry;** Theodore Lapainis¹; Stanislav Rubakhin²; Jonathan V. Sweedler¹; ¹University of Illinois, Urbana, IL; ²Beckman Institute, UIUC, Urbana, IL
- WP 118 **GC/APCI-TOF MS: A New Valuable Tool for Analysis of Biofluids in Metabolomics Studies;** Alegria Carrasco-Pancorbo¹; Ekaterina Nevedomskaya¹; Tiziana Pacchiarotta¹; Ali Kettani²; Thomas Arthen-Engeland³; Gabriela Zurek³; Carsten Baessmann³; Oleg Mayboroda¹; Andre Deelder¹; ¹LUMC, Leiden, NL; ²Bruker Daltonics Inc., Fremont, CA; ³Bruker Daltonik GmbH, 28359 Bremen, Germany
- WP 119 **A Laboratory Information Management System (LIMS) for High-Throughput LC-MS Metabolomics-Based Biomarker Discovery;** Alan Smith¹; Yuerong Zhu²; Paul R. West¹; April M. Weir¹; Sudeepa Bhattacharyya¹; Gabriela G. Cezar¹; ¹Stemina Biomarker Discovery, Madison, WI; ²BioInfoRx, Inc., Madison, WI
- WP 120 **Challenges in the Investigation of the Metabolic Changes in *Nicotiana Attenuata* during Insect Herbivory Using an Improved HPLC-TOF-MS Method;** Matthias Schoettner¹; Beatrice Berger¹; Emmanuel Gaquerel¹; Eva Rothe¹; Birgit Schneider²; Gabriela Zurek²; Aiko Barsch²; Mike McDonnell³; Ian T. Baldwin¹; ¹MPI Chemical Ecology, Jena, Germany; ²Bruker Daltonik GmbH, Bremen, Germany; ³Bruker Bioscience, Delta, BC
- WP 121 **Identification of Metabolites in a Human Plasma Standard Reference Material by Comprehensive two Dimensional Gas Chromatography-Time-of-Flight Mass Spectrometry;** Gauthier Eppe; Elizabeth A. McGaw; Nathan G. Dodder; Bruce A. Benner Jr; Karen W. Phinney; Michele M. Schantz; *NIST, Gaithersburg, MD*
- WP 122 **Metabolomics-Based Approach to Antibiotic Resistance in *Staphylococcus Aureus*;** Kyu Rhee²; Steven M. Fischer¹; Elizabeth Alexander²; ¹Agilent Technologies, Santa Clara, CA; ²Weill Cornell Medical College, NY, NY
- WP 123 **Metabolite Profiling of the Novel NIST Standard Human Plasma Using a Multi-Target Calibration Approach in GC/Quadrupole MS;** Mine Palazoglu; Sevini Shahbaz; Oliver Fiehn; *UC Davis, Davis, CA*
- WP 124 **Precision and Accuracy of Carbon Isotope Ratios is Critical for Isotopomer-Based Metabolomics: A Comparative study of FTICR and NMR;** Bogdan Bogdanov¹; Teresa W Fan^{1,2}; Andrew N Lane^{1,2}; Richard M Higashi^{1,2}; ¹University of Louisville Department of Chemistry, Louisville, KY; ²James Graham Brown Cancer Center, Louisville, KY
- WP 125 **Metabolomics of Volatile Compounds by a New BinBase Mass Spectral Database;** Gert Wohlgemuth; Kirsten Skogerson; Oliver Fiehn; *UC Davis, Davis, CA*
- WP 126 **The Metabolomic Analysis of Simvastatin Dosed Rat Plasma by GC/TOF/MS;** Henry Y. Shion¹; John P. Shockcor¹; Douglas Stevens³; Jose Castro-perez¹; Kate Yu¹; Emma Marsden-edwards²; Eleni Gika⁴; Georgios Theodoridis⁴; Ian Wilson⁵; ¹Waters Corp., Milford, MA; ²Waters Corporation, manchester, UK; ³Waters Corp, Holden, MA; ⁴Aristotle University, Thessaloniki, Greece; ⁵Astra Zeneca, Macclesfield, UK
- WP 127 **Identification of Key Metabolic Pathways in Polycystic Ovary Syndrome by Mass Spectrometry, NMR and Cavity Ring Down Spectroscopy;** Michael R. Shortreed¹; Fariba Assadi-Porter¹; Leah D. Whigham¹; Mark E. Cook¹; Butz Daniel¹; Warren P. Porter¹; David H. Abbott¹; John L. Markley¹; Hamid Eghbalnia²; Lloyd M. Smith¹; ¹University of Wisconsin, Madison, WI; ²University of Cincinnati, Cincinnati, OH
- WP 128 **Comparison and Combination of Direct Infusion- and LC-FTMS for Comprehensive Plant Metabolomics;** Jun Han¹; Ryan M Danell²; Monica H Elliott¹; Michael Deyholos³; Christoph H Borchers¹; ¹UVic-GBC Proteomics Centre, Victoria, Canada; ²Danell Consulting, Greenville, NC; ³Dept Biological Sciences, University of Alberta, Edmonton, AB, Canada
- WP 129 **Single Cell Differential Metabolomics for Stimulated Allergy Cells;** Shoko Inoue; Hajime Mizuno; Naohiro Tsuyama; Takanori Harada; Tsutomu Masujima; *Hiroshima Univ. BioMed., Hiroshima City, Japan*
- WP 130 **Biomarker Discovery in a Glaucoma Study Using Targeted and Non-Targeted Metabolomics Approaches;** Richard Schneider¹; Marielle Delnomdedieu¹; Andy Butler¹; Poulabi Banerjee¹; Klaus Weinberger²; Denise Sontag²; ¹Pfizer Global R&D, Groton, CT; ²Biocrates Life Sciences, Innsbruck, Austria

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- WP 131 **Extending the Dynamic Range of Proteome Measurement in a Natural Microbial Community with IEF Protein Fractionation and Multidimensional LC-MS/MS;** Brian D. Dill¹; Paul Wilmes²; Vincent Deneff²; Manesh Shah¹; Michael P. Thelen³; Brian Erickson^{1,4}; Robert Hettich¹; Jill F.

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- Banfield²; Nathan C. VerBerkmoes¹; ¹*Oak Ridge National Laboratory, Oak Ridge, TN*; ²*University of California, Berkeley, Berkeley, CA*; ³*Pacific Northwest National Laboratory, West Richland, WA*; ⁴*University of Tennessee, Knoxville, TN*
- WP 132 **Love It or Leave It... On the Use of SDS in GELFrEE for Protein Prefractionation and MS Analysis**; Alan A. Doucette; Fang Liu; *Dalhousie University, Halifax, Canada*
- WP 133 **Use of Low Conductivity Buffers in Isoelectric Trapping Separations and MS Analysis**; Stephanie M. Cologna; William K. Russell; Gyula Vigh; David H. Russell; *Texas A&M University, College Station, TX*
- WP 134 **Proteome Prefractionation Using Three Complementary 2D Solution Phase Platforms**; Mark J. Wall; Alan A. Doucette; *Dalhousie University, Halifax, Canada*
- WP 135 **Comparison of 2-D and 3-D Protein Profiling of Melanoma Cells: Depth of Analysis and Reproducibility of Protein Detection**; Huan Wang; Tony Chang-Wong; Hsin-Yao Tang; David W. Speicher; *The Wistar Institute, Philadelphia, PA*
- WP 136 **Protein Separation and Identification Using Thin-Layer Chromatography Coupled With Electrospray-Assisted Laser Desorption Ionization Mass Spectrometry**; Min-Zong Huang; Ya-Ting Chan; Jentaie Shiea; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*
- WP 137 **Surface-Enhanced Protein Analysis: Effect of Different Surfaces on Reflectron Profiling and MS/MS Analysis Using ToF-ToF Instrumentation**; Fiona Plows¹; Vanitha Thulasiraman¹; Matthew Hammond¹; Steve Roth¹; Mariana Rusa¹; Diane McCarthy²; ¹*Bio-Rad Laboratories, Inc., Hercules, CA*; ²*Bio-Rad, Malvern, PA*
- WP 138 **Selective Purification of Azide-Containing Peptides from Complex Mixtures**; Merel A. Nessen; Gertjan Kramer; Jaap Willem Back; Linde E.J. Smeenk; Jan H. van Maarseveen; Leo J. de Koning; Luitzen de Jong; Henk Hiemstra; Chris G. de Koster; *University of Amsterdam, Amsterdam, Netherlands*
- WP 139 **Analytical Liquid-Liquid Electroextraction Coupled to LC-MS to Enhance the Detection Limits of Peptides**; Peter Lindenburg¹; Ubbo Tjaden¹; Jan Van Der Greef^{1,2}; Thomas Hankemeier¹; ¹*Leiden University, Leiden, Netherlands*; ²*TNO Systems Biology, Aj Zeist, Netherlands*
- WP 140 **Merging Single-Particle Electron Microscopy and Mass-Spectrometry-Based Proteomics - EM Carbon-Film-Assisted Endoprotease Digestion (ECAD)**; Florian M. Richter¹; Monika M. Golas²; Björn Sander²; Berthold Kastner³; Reinhard Lührmann³; Holger Stark⁴; Henning Urlaub¹; ¹*Bioanalytical MS, MPI Biophysical Chemistry, Göttingen, Germany*; ²*EM Research Laboratory, University of Århus, Århus, Denmark*; ³*Cellular Biochemistry, MPI Biophysical Chemistry, Göttingen, Germany*; ⁴*3D Electron Microscopy, MPI Biophysical Chemistry, Göttingen, Germany*
- WP 141 **Novel Efficient and Automated On-Line Enrichment Strategy for Phosphopeptide Analysis**; Yelena Margolin¹; Bogdan A. Budnik²; Emily Freeman¹; William S. Lane²; Alexander R. Ivanov¹; ¹*Harvard University, HSPH, Boston, MA*; ²*Harvard University, Cambridge, MA*
- WP 142 **Dynamic Range Compression via Hexapeptide Libraries for Increased Proteome Coverage in Whole Human Saliva**; Sricharan Bandhakavi; Matthew D Stone; Timothy J Griffin; *University of Minnesota, Minneapolis, MN*
- WP 143 **Squid Neuron Analysis: Applying Proteomic Software Tools to LC/MS/MS Data from Species without Annotated Genomes**; Anthony J. Makusky²; Joseph A. DeGiorgis¹; Jeffrey A. Kowalak²; Sanford P. Markey²; ¹*Providence College, Providence, RI*; ²*NIMH, NIH, Bethesda, MD*
- WP 144 **Comparison of Proteogenomic Approaches Across Kingdoms: A Joint Effort in Gene Modeling**; Samuel O. Purvine¹; Kim K. Hixson¹; Muktak Aklujkar²; Ellen Panisko¹; Lee Ann McCue¹; Matthew Monroe¹; Lykidis Athanasios³; Kyrpidis Nikos³; Deanna Auberry¹; Derek Lovely²; Grigoriev Igor³; Scott Baker¹; Mary Lipton¹; Gordon Anderson¹; Richard D. Smith¹; ¹*Pacific Northwest National Laboratory - Battelle, Richland, WA*; ²*University of Massachusetts, Amherst, Massachusetts*; ³*Joint Genome Institute, Walnut Creek, California*
- WP 145 **Deconvolution of Isotopically Unresolved Multiply Charged States of Intact Proteins and Peptides**; Natalia Belyaeva; Tonya Second; *Thermo Fisher Scientific, San Jose, CA*
- WP 146 **Optimization of a LC-FTMS Proteomics Pipeline for High Throughput and Confident Peptide Identifications**; Ronald J. Moore; Aleksey Tolmachev; Anil K. Shukla; Therese R.W. Clauss; Rui Zhang; David J. Anderson; Karl K. Weitz; Brianne O. Petritis; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- WP 147 **A Novel Way to Observe Protein Interaction Environments Using the Global Proteome Machine Database**; Chengcheng Zhang; Dan Evans; Ronald Beavis; Juergen Kast; *University of British Columbia, Vancouver, Canada*
- WP 148 **A Comparison of Calibration Equations for Improving Mass Accuracy by Internal Recalibration of TOF MS/MS Data Sets From Whole-cell Digests**; Cesar Costa Vera¹; André M. Deelder²; Magnus Palmblad²; ¹*Escuela Politécnica Nacional / Dept. de Física, Quito, Ecuador*; ²*Leiden University, Leiden, Netherlands*
- WP 149 **Quantifying Multiplexed MS/MS Spectral "Chimeras" in Shotgun Proteomics**; Stephane Houel; Robert A. Abernathy; Kutralanathan Renganathan; Eric S. Witze; Chia-yu Yen; Karen Meyer-Arendt; Kathryn A. Resing; Natalie G. Ahn; William M. Old; *Univ. of Colorado, Boulder, CO*
- WP 150 **An Information-Dependent Iterative MS/MS Acquisition (IMMA) Tool for Non-redundant Protein Identification on a LC MALDI MS/MS Platform**; Haichuan Liu¹; Lee Yang²; Nikita Khainovski³; Simon Allen¹; Ming Dong²; Evelin D. Szakal¹; Megan Choi²; Steven Hall¹; Susan Fisher¹; Jian Jin²; H. Ewa Witkowska¹; Mark D. Biggin²; ¹*UCSF Sandler-Moore Mass Spectrometry Core Facility, San Francisco, CA*; ²*Lawrence Berkeley National Laboratory, Berkeley, CA*; ³*Consultant, Framingham, MA*
- WP 151 **Statistical Calibration of XCorr is More Important for Spectra Derived Using Data-Independent Acquisition**; Sean McIlwain; Michael J. Maccoss; William Noble; *University of Washington, Seattle, WA*
- WP 152 **Fast and Accurate Identification of Cross-Linked Peptides for the Structural Analysis of Large Protein Complexes and to Elucidate Interaction Networks**

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- Salman Tahir; Jimi-Carlo Bukowski-Wills; Morten Rasmussen; Juri Rappsilber; *Wellcome Trust Centre for Cell Biology, Edinburgh, UK*
- WP 153 **Development of a Mass-Spectrometry Identifiable Cross-Linker and Application to a the 34K-Actin Protein System**; Lisabeth Hoffman¹; Paul Griffin¹; Marcus Fechheimer¹; Evgeniy Petrotchenko²; Christoph Borchers²; Jon Amster¹; ¹*University of Georgia, Athens, GA*; ²*UVic-GBC Proteomics Centre, Victoria, BC*
- WP 154 **Analysis of Crosslinked Proteins Using a Marker-Ion Labeled Crosslinker**; Tobias Beckhaus; N. Arrey Tabiwang; Florian Durst; Volker Doetsch; Michael Karas; *Goethe-University of Frankfurt, Frankfurt Am Main, Germany*
- WP 155 **Mapping Protein-Protein Interactions in Human Serum with the Protein Interaction Reporter (PIR)/Chemical Cross-Linking Strategy**; Chad Weisbrod²; Li Yang¹; Xiaoting Tang²; James Bruce²; ¹*Washington State University, Pullman, WA*; ²*University of Washington, Seattle, WA*
- WP 156 **Novel Photo-Cleavable Protein Interaction Reporter (pcPIR) Cross-Linking and Data-Dependent MS/MS Strategy for Studying Protein-Protein Interactions**; Li Yang¹; Xiaoting Tang²; Gerhard Munske¹; James Bruce²; ¹*Washington State University, Pullman, WA*; ²*University of Washington, Seattle, WA*
- WP 157 **Monitoring Protein Conformation Changes as an Activating Step for Protein Interactions with Cross-Linking/MS Analysis**; Zhuo Chen¹; Morten Rasmussen¹; Salman Tahir¹; C.A.C Clark²; Paul Barlow²; Juri Rappsilber¹; ¹*Wellcome Trust Centre for Cell Biology, Edinburgh, UK*; ²*School of Chemistry, University of Edinburgh, Edinburgh, UK*
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- WP 158 **Top-Down Identification of Dihydroergoloids in Equine Plasma by MSⁿ Ion Tree Mass Spectrometry and High Resolution Accurate Mass Analysis**; Jeffrey Rudy¹; Carisa Dixon²; Cornelius Uboh^{1,2}; Lawrence Soma²; ¹*PA Equine Toxicology, West Chester, PA*; ²*University of Pennsylvania, Kennett Square, PA*
- WP 159 **Investigations into Drug Stability Using LC-MS-MS Data Combined with Statistical Analysis**; Stephen Rumbelow¹; Johnnie Brown²; ¹*Croda Inc, New Castle, DE*; ²*Applied Biosystems, Framingham, MA*
- WP 160 **LC/MS/MS Determination of Gemcitabine Incorporation into DNA as a Useful Surrogate for Optimizing Drug Exposure**; Barry R. Jones¹; Barry Lutzke²; Enaksha R Wickremsinhe²; Bradley L. Ackermann²; Angela M. Bones²; Angela B. Freeman²; Susan E. Pratt²; Christopher A. Schmalz²; Gary A. Schultz¹; ¹*Advion BioServices, Inc., Ithaca, NY*; ²*Eli Lilly & Company, Indianapolis, IN*
- WP 161 **Unambiguous Assignment of the Elemental Composition through the Use of A Fuzzy Logic Algorithm**; Richard Gedamke¹; Serhiy Hnatyshyn^{1,2}; ¹*Bristol-Myers Squibb, New Brunswick, NJ*; ²*BMS Co., Princeton, NJ*
- WP 162 **Laser Desorption Mass Spectrometric Analysis of Paints and Pigments Used by Modern Artists**; Daniel P. Kirby; Narayan Khandekar; Lynn Lee; *Straus Center, Harvard, Cambridge, MA*
- WP 163 **Gas Chromatography SALDI: Importance of Proton Affinity and Laser Fluence to Sensitivity and Ion Fragmentation**; Sergey Alimpiev²; Alexander Grechnikov³; Jan Sunner¹; Alexey Borodkov³; Serfey Nikiforov²; Yaroslav Simanovsky²; ¹*University of Portsmouth, Portsmouth, UK*; ²*Prokhorov General Physics Inst Russ Acad Sci, Moscow, Russia*; ³*Vernadsky Institute Geochemistry Analytical Chem, Moscow, Russia*
- WP 164 **Distinguishing Regioisomers of Carboxylated Aromatic Analytes via Atmospheric Pressure Chemical Ionization and Tandem Mass Spectrometry**; Lucas Amundson¹; Steven Habicht¹; Vanessa Gallardo¹; Mingkun Fu¹; Ryan Shea²; Allen Mossman²; Hilkka Kenttamaa³; Hilkka Kenttamaa³; ¹*Purdue University, West Lafayette, IN*; ²*BP Chemicals, Naperville, IL*; ³*Chemistry Department, West Lafayette, IN*
- WP 165 **A New Robust Library Search Algorithm for LC-MS/MS of Small Molecules and its Spectral Library Sharing Mechanism**; Yann Mauron¹; Roman Mylonas¹; Alexandre Masselot²; Pierre-Alain Binz^{1,2}; Marc Fathi³; Veronique Viette⁴; Denis F Hochstrasser^{3,5}; Frederique Lisacek¹; ¹*Swiss Institute of Bioinformatics, Geneva, Switzerland*; ²*Geneva Bioinformatics (GeneBio), Geneva, Switzerland*; ³*Geneva University Hospitals, Geneva, Switzerland*; ⁴*AdMed Foundation, La Chaux-de-Fonds, Switzerland*; ⁵*Swiss Center for Applied Human Toxicology, Geneva, Switzerland*
- WP 166 **New Qualitative Screening Software for Automated Small Molecule Multi-Target Analysis**; Graham A. McGibbon¹; Mark A. Bayliss¹; Vitaly Lashin²; ¹*Advanced Chemistry Development Inc., Toronto, ON*; ²*Advanced Chemistry Development, Ltd, Moscow, Russia*
- WP 167 **Determination of Relative Affinities of Staurosporine Derivatives for Quinone Reductase-2 Using Ultrafiltration of LC-MS**; Yongsoo Choi¹; Megan Sturdy¹; Katherine Maloney²; Sang Jip Nam²; Shunyan Mo¹; Andrew D Mesecar¹; John M Pezzuto³; William Fenical²; Jimmy Orjala¹; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL*; ²*University of California, La Jolla, California*; ³*University of Hawaii at Hilo, Hilo, Hawaii*
- WP 168 **Live Single Cell Video-Mass Spectrometry for Straightforward Analysis of Cellular Pathways**; Tsutomu Masujima; Naohiro Tsuyama; Hajime Mizuno; *Hiroshima Univ. BioMed., Hiroshima, Japan*
- WP 169 **Mass Spectrometric Analysis of Small Molecules Using Nano-Assisted Laser Desorption/Ionization (NALDI) MS**; Chul Yoo¹; Michael Ronk¹; David J. Semin¹; Sam Fu²; Joseph P. Fox²; Gongyi Shi²; ¹*Amgen, Inc., Thousand Oaks, CA*; ²*Bruker Daltonics, Fremont, CA*
- WP 170 **Purity Analysis of HTS Compounds for the National Toxicology Program Utilizing Liquid Chromatography Mass Spectrometry**; Lisa L. Haney¹; Leslie L. Moody¹; Kim T. Thornton¹; Bart A. O'Brien¹; Roger K. Harris¹; Peter J. Schebler¹; Joseph W. Algaier¹; Beby Jayaram²; Cynthia S. Smith²; ¹*Midwest Research Institute, Kansas City, MO*; ²*National Toxicology Program - NIEHS, Research Triangle Park, NC*
- WP 171 **A Sensitive LC-MS/MS Method for the Determination of KX2-391 in Human Plasma**; Xinping Fang¹; Dawei Zhou¹; Anh Pharm¹; David, G. Hangauer²; Jinn Wu¹; ¹*XenoBiotic Laboratories, Inc., Plainsboro, NJ*; ²*Kinex Pharmaceuticals, LLC, Buffalo, NY*
- WP 172 **New Algorithm for Determination of Isotopic Envelopes on Labelled Compounds, Comparison of MS and MS/MS Platforms for Isotopic Abundance**

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- Measurements; Gustaf Hulthe; Sofia Essén; Magnus Johansson; *Medicinal Chemistry, Mölndal, Sweden*
- WP 173 **Monitoring Levels of Salsolinol and Neurotransmitters in the Brain of Alcohol Preferring Rats Exposed to Alcohol and Treated with Ceftriaxone**; Youssef Sari²; Loubna A. Hammad¹; Marwa M. Saleh¹; George V. Rebec²; Yehia Mechref¹; ¹*Department of Chemistry, Indiana University, Bloomington, IN*; ²*Department of Psychological, Indiana University, Bloomington, IN*
- WP 174 **Feasibility and Reliability of Low and High-Resolution MS Approaches for Accurate Mass and Molecular Formula Determination in Drug Discovery**; Vladimir Capka¹; Ming Gu²; ¹*Astra Zeneca R&D Boston, Waltham, MA*; ²*Cerno Bioscience, Yardley, PA*
- WP 175 **Optimizing Mass Spectrometric Detection for Ion Chromatography: I. Common Anions and Organic Acids**; Jinyuan Wang; Stacy Henday; William C. Schnute; *Dionex Corporation, Sunnyvale, CA*
- WP 176 **Investigation of Infrared Multiphoton Dissociation with Potential Application to Pharmacologically-Relevant Compounds**; K Wayne Taylor; *Lilly, Indianapolis, IN*
- WP 177 **Mass Spectral Method for the Quantification of Host-Guest Interactions Including Ionophore-Siderophore Assemblies**; Esther M. Tristani; George R. Dubay; Alvin L. Crumbliss; *Duke University, Durham, NC*
- IMAGING MS: PEPTIDES AND PROTEINS, 178 - 195**
- WP 178 **Spatially-Resolved Proteomic Analysis of Chick Heart Valves**; Andrew K. Gelasco¹; Angus C. Grey²; Ricardo A. Moreno-Rodriguez¹; Edward L. Krug¹; Kevin L. Schey²; ¹*Medical University of South Carolina, Charleston, SC*; ²*Vanderbilt University, Nashville, TN*
- WP 179 **MALDI Imaging of Prostate Cancer Tissue Toward Validation of Biomarker Identification**; Christopher Hattan¹; Barbara Leinweber¹; Raymond Nagle²; Jaime Gard²; Gary Pestano³; Phillip Miller³; Jan Froehlich³; Gongyi Shi⁴; Gary Kruppa⁴; George Tsapralis⁵; Serrine S. Lau¹; ¹*Univ of Arizona, Pharmacy, Tucson, AZ*; ²*Univ of Arizona, Medicine, Tucson, AZ*; ³*Ventana Medical Systems, Tucson, AZ*; ⁴*Bruker Daltonics, Billerica, MA*; ⁵*Center for Toxicology, Tucson, AZ*
- WP 180 **Mapping VEGF Splice Variants in the Rat Model of Retinopathy by MALDI IMS**; Joey C. Latham; Susan E. Yanni; John S. Penn; Richard M. Caprioli; *Vanderbilt Univ Sch of Med, Nashville, TN*
- WP 181 **Imaging Therapeutic "Decoy" Oligodeoxynucleotide within Tissue Sections by MALDI MS**; Rita Casadonte¹; Joseph M. Amann¹; Jennifer R. Grandis²; David P. Carbone¹; Richard M. Caprioli¹; ¹*Vanderbilt Univ Sch of Med, Nashville, TN*; ²*University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania*
- WP 182 **MALDI Mass Spectrometric Imaging of Nervous Tissue Using the Stretched Sample Method**; Tyler A Zimmerman¹; Stanislav Rubakhin²; Elena Romanova¹; Jonathan Sweedler¹; ¹*University of Illinois, Urbana, IL*; ²*Beckman Institute, UIUC, Urbana, IL*
- WP 183 **Utilizing NIMS and MALDI Imaging Mass Spectrometric Techniques for Lipidomic and Peptidomic Studies of Crab and Murine Brain**; Robert Sturm¹; Ruibing Chen¹; Hin-Koon Woo²; Oscar Yanes²; Gary Siuzdak²; Lingjun Li¹; ¹*University of Wisconsin-Madison, Madison, WI*; ²*The Scripps Research Institute, La Jolla, CA*
- WP 184 **Imaging Mass Spectrometry Reveals Peptide Partitioning in MALDI Samples**; Delphine Debois; Pascale Lemaire; Loic Quinton; Valerie Gabelica; Edwin De Pauw; *University of Liege, LSM-CART, Liège, Belgium*
- WP 185 **Visualization of Mouse Cardiovascular Modeling from Embryonic Day 14.5 to Adult by High Resolution MALDI Imaging**; Peggi Angel¹; Pierre Chaurand¹; Joey V. Barnett^{1,2}; H. Scott Baldwin^{1,2}; Richard M. Caprioli²; ¹*Vanderbilt University Medical Center, Nashville, Tennessee*; ²*Vanderbilt Univ Sch of Med, Nashville, TN*
- WP 186 **Comparison of Laser Desorption 7.87 eV Postionization Mass Spectrometry with MALDI for Detection of Peptides in Bacterial Biofilms**; Artem Akhmetov¹; Gerald Gasper¹; Chhavi Bhardwaj¹; Peter Koin¹; Ross Carlson²; Jerry F. Moore³; Luke Hanley¹; ¹*University Illinois Chicago, Chicago, IL*; ²*Montana State University, Bozeman, MT*; ³*MassThink LLC, Naperville, IL*
- WP 187 **Analysis of Potential Biomarkers in Human Ovarian Cancer Using MALDI Imaging Mass Spectrometry**; Yanfeng Chen; Ying Liu; Rebecca Shaner; DeEtte Walker; John McDonald; Alfred Merrill; Mark Cameron Sullards; *Georgia Institute of Technology, Atlanta, GA*
- WP 188 **MALDI Imaging of Posttranslationally Modified Proteins**; Kevin L. Schey; Angus Grey; *Vanderbilt University, Nashville, TN*
- WP 189 **Isobaric Mass Tags for Quantitative Multiplexed Imaging of mRNA Distributions by *in-situ* Hybridisation and MALDI-MS**; Emrys A Jones¹; Adam McMahon¹; Andrew Thompson²; Emmanuel Raptakis³; ¹*University of Manchester, Manchester, UK*; ²*Trillion Genomics, Cambridge, UK*; ³*Kratos Analytical, Manchester, UK*
- WP 190 **Multiple Sequential Imaging of PL's, Proteins, and Peptides on a Single Tissue Section using MALDI IMS**; William Hardesty¹; Richard M. Caprioli²; ¹*Vanderbilt University, Nashville, TN*; ²*Vanderbilt Univ Sch of Med, Nashville, TN*
- WP 191 **Imaging Mass Spectrometry Comparative Analysis of Human Pancreatic Adenocarcinoma, Insulinoma and Control**; Alexandra van Remoortere; René J.M. van Zeijl; Stefan M. Willems; André M. Deelder; Liam McDonnell; *LUMC, Leiden, Netherlands*
- WP 192 **Chemical Molecular Imaging for Nanoparticles Induced Brain and Lung Damage Animal Models by MALDI-TOF MS**; Jen-kun Chen; Yi-Ting Wu; Jui-Ping Li; Chia-Hua Chen; Chung-Shi Yang; *National Health Research Institutes, Zhunan, Taiwan*
- WP 193 **FT-ICR and SIMS-TOF Imaging Mass Spectrometry for the Characterization of Human Pancreatic Disease**; Donald F. Smith¹; Marc C. Duursma¹; Michael Hanselmann²; Fred A. Hamprecht²; Nathalia A. Giese²; Ron M.A. Heeren¹; ¹*FOM-AMOLF, Amsterdam, Netherlands*; ²*University of Heidelberg, Heidelberg, Germany*
- WP 194 **Enhancement of Au and Silica Nanoparticle Matrices for Tissue Imaging utilizing MALDI-TOF MS**; Jeremy D. Post¹; Alice Delvolve¹; J. Albert Schultz²; Steven Oldenburg³; Amina S. Woods⁴; ¹*NIH/NIDA-IRP, Baltimore, MD*; ²*Ionwerks, Inc., Houston, TX*; ³*nanoComposix, San Diego, CA*; ⁴*NIDA IRP, NIH, Baltimore, MD*
- WP 195 **LC-SIMS: The Doors Wide Open for Biological Applications of SIMS in Imaging Mass**

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Spectrometry; Luke MacAleese; Leendert A. Klerk;
Donald F. Smith; Marc C. Duursma; Ron M.A. Heeren;
FOM Institute AMOLF, Amsterdam, Netherlands

ION MOBILITY, 196 - 217

- WP 196 **Gating in Ion Mobility Spectrometry;** Bill Siems¹;
Eric J. Davis¹; Kristyn Roscioli¹; Christina Crawford¹;
Herbert H Hill²; ¹*Washington State University, Pullman,*
WA; ²*Washington State University, Pullman, WA*
- WP 197 **Tissue Imaging of Pharmaceuticals by Ion Mobility**
Mass Spectrometry; Stacey R. Oppenheimer¹; Tasneem
Bahrainwala²; Emmanuelle Claude²; ¹*Pfizer, Groton,*
CT; ²*Waters Corporation, Beverly, MA*
- WP 198 **Development and Evaluation of a DMS-Based**
Method for the Detection of Insecticides; Erick
Molina¹; Erkinjon Nazarov³; Ulrich R. Bernier²; Richard
A. Yost¹; ¹*University of Florida, Gainesville, FL;*
²*USDA-ARS-CMAVE, Gainesville, FL;* ³*Sionex, Bedford,*
MA
- WP 199 **Ion/Ion Reaction Effects on the Conformation of**
Proteins, Peptides, and Small Biomolecules; Derrick
L. Morast¹; R. Sam Houk¹; Gregg Schieffer¹; Ethan R.
Badman²; ¹*Iowa State University, Ames, IA;* ²*Hoffmann-*
La Roche Inc., Nutley, NJ
- WP 200 **Structural Transitions of the [M + 10H]¹⁰⁺ of**
Ubiquitin by Overtone Mobility Spectrometry
(OMS); Sunyoung Lee; Fabiane M Nachtigall; David E.
Clemmer; *Indiana University, Bloomington, IN*
- WP 201 **Hydrogen/Deuterium Exchange of Mobility Selected**
Ubiquitin Ions Using a High-Resolution Circular Ion
Mobility Spectrometry Instrument in Ring-Down
Mode; Rebecca S. Glaskin; Samuel Merenbloom; David
E. Clemmer; *Indiana University, Bloomington, IN*
- WP 202 **Developing Techniques for Characterizing the Serum**
Glycoproteome with LC-IMS-MS; Nicholas A
Pierson; Huilin Shi; Stephen Valentine; David E.
Clemmer; *Indiana University, Bloomington, IN*
- WP 203 **Differential Mobility Spectrometer Coupled with**
LTQ FT to Evaluate Improvement of Proteomic
Coverage of Complex Protein Mixtures; Sergei
Ilchenko¹; Daniela M Schlatter¹; Mark Chance¹; Evgeny
V Krylov²; Erkinjon Nazarov²; ¹*Case Western Reserve*
University, Cleveland, OH; ²*Sionex Corp., Bedford, MA*
- WP 204 **Accurate and Reproducible Reduced Mobility Values**
in Ion Mobility Spectrometry; Christina L. Crawford¹;
Roberto Fernandez Maestre¹; Charles S. Harden²;
Vincent M. McHugh³; William F. Siems¹; Herbert H.
Hill¹; ¹*Washington State University, Pullman, WA;*
²*SAIC/ECBC Operations, Aberdeen Proving Ground,*
MD; ³*US Army Edgewood Chem Bio Center, Aberdeen*
Proving Ground, MD
- WP 205 **Developing IMS-IMS-IMS-MS for Analysis of Large**
Protein Complexes; Natalya Atlasevich; Joshua Maze;
Brian Bohrer; Martin Jarrold; David E. Clemmer;
Indiana University, Bloomington, IN
- WP 206 **Ion Mobility-Mass Spectrometry: A Novel Approach**
to the Analysis of Gold Monolayer Protected
Clusters; Kellen M. Harkness; David E. Cliffl; John A.
McLean; *Vanderbilt University, Nashville, TN*
- WP 207 **Accelerated Detection of Biomarkers Using DMS-**
Prefiltered Mass Spectrometry; Stephen L Coy¹;
Evgeny V Krylov¹; Erkinjon Nazarov²; ¹*Sionex Corp.,*
Bedford, MA; ²*Sionex, Bedford, MA*
- WP 208 **Middle-Down Sequencing of Monoclonal Antibodies**
by Ion Mobility Q-TOF Mass Spectrometry;
Dhanashri Bagal¹; Himanshu Gadgil²; Paul Schnier¹;
¹*Amgen, Thousand Oaks, CA;* ²*Amgen Inc, Seattle, WA*

- WP 209 **Ion Mobility-Mass Spectrometry Measurements of**
Insulin; Rune Salbo¹; Claus G Nielsen¹; Ingrid, V.
Pettersson¹; Kim F. Haselmann¹; Iain D G Campuzano²;
Peter, K. Nielsen¹; Helle Naver¹; ¹*Novo Nordisk,*
Maaloev, Denmark; ²*Waters Corporation, Manchester,*
UK
- WP 210 **Collision Cross-Section Calculation of Serine**
Octamer Clusters Using Travelling Wave-Based
Ionmobility Mass Spectrometer; Gustavo H M F
Souza¹²; Marcos N Eberlin³; ¹*Waters Corporation, Sao*
Paulo, Brazil; ²*Waters Corporation, Manchester, UK;*
³*Thomson Lab UNICAMP, Campinas, SP, Brazil*
- WP 211 **Determining the Structures and the Assembly of**
AAA+ Motor, Sliding Clamp Loader By Ion Mobility
and Tandem Mass Spectrometry; Ahyoung Park;
Brandon Ruotolo; Argyris Politis; Daniel Barsky; Carol
Robinson; *University of Cambridge, Cambridge, UK*
- WP 212 **Development of a Circular Drift Tube for High**
Resolution Ion Mobility Spectrometry; Samuel L.
Merenbloom; Rebecca S. Glaskin; Zachary B. Henson;
David E. Clemmer; *Indiana University, Bloomington, IN*
- WP 213 **Periodic Focusing Field Electrodes for High**
Resolution Ion Mobility Spectrometry; Ryan Blase;
Kent Gillig; David H. Russell; *Texas A&M University,*
College Station, TX
- WP 214 **A Different Way of Measuring Ion Mobility for**
Absolute Cross Sections at Ultra-High Resolution
TOF MS; Gökhan Baykut; Oliver von Halem; Oliver
Raether; *Bruker Daltonik GmbH, Bremen, Germany*
- WP 215 **Identifying Human Plasma N-linked Glycan Isomers**
Using Combined Ion Mobility-Mass Spectrometry
and Molecular Modeling Methods; Manolo D.
Plasencia; V. Blake Champlin; David E. Clemmer;
Indiana University, Bloomington, IN
- WP 216 **Separation of Isomeric Carotenoids Using**
Atmospheric Pressure Chemical Ionization Ion
Mobility Spectrometry-Time-of-Flight Mass
Spectrometry; Linlin Dong¹; Roderick Davis²; Richard
B. Van Breemen¹; ¹*University of Illinois College of*
Pharmacy, Chicago, IL; ²*Univ. of Illinois at Chicago*
Research Resources Ctr, Chicago, IL
- WP 217 **Application of Ion Mobility Techniques in the**
Analysis of the Impurities in a Mixture of Liquid
Crystals; Sung-Chan Jo¹; Kyoung-Wook Kim²;
Weonsik Oh¹; ¹*Samsung Electronics Co., Ltd., Yongin,*
South Korea; ²*Waters Korea Limited, Seoul, Korea*

QUANTITATION: SMALL MOLECULE, 218 - 246

- WP 218 **LC/MS/MS Determination of Emtricitabine and**
Tenofovir in Human Plasma; Lina Tang; Hsun-Wen
Chou; Venketraman Junnotula; Yuwen Zhao; Kris
Singleton; Jamie Zhao; Yuan-shek Chen; Kumar Ramu;
QPS, LLC, Newark, DE
- WP 219 **Evaluation of Free and Protein-Bound 3-**
Nitrotyrosine in Human Plasma By Isotope Dilution
LC-QqQ with an Artifactual Nitration-Free
Proteolysis; Thierry Delatour; Janique Richoz;
Christophe Cavin; Aurélien Desmarchelier; *Nestle*
Research Center, Lausanne, Switzerland
- WP 220 **Studies of Intestinal Absorption and Serum Levels of**
Novel Chemopreventive Agents; Soyoun Ahn¹; Mark S
Cushman^{2,2}; John M Pezzuto²; Richard B. Van
Breemen¹; ¹*University of Illinois, Chicago, IL;* ²*Purdue*
University, West Lafayette, IN
- WP 221 **Increasing the Selectivity of Clenbuterol Detection in**
Urine Samples By Using MS3 on a Hybrid
Quadrupole-Linear Ion Trap; Mauro Aiello; Rolf

WEDNESDAY POSTERS

- Kern; Beth Fernandez; Loren Olson; *Applied Biosystems, San Jose, CA*
- WP 222 **Software Assisted Chiral Chromatographic Method Development for the Quantitation of Four Chiral Drugs in Human Plasma using LC/MS/MS;** Patrick Bennett; Min Meng; Lisa Rohde; *Tandem Labs, Salt Lake City, UT*
- WP 223 **Application of High pH Mobile Phase in LC-ESI(+)/MS/MS Under HILIC Mode to Reach Optimal Sensitivity for Bioanalysis;** Eugénie-Raphaëlle Bérubé; Jean-Nicholas Mess; Milton Furtado; Fabio Garofolo; *Algorithme Pharma Inc., Laval (Montreal), Quebec, Canada*
- WP 224 **A Novel Algorithm for Quantitative LC Peak Integration;** Lyle Burton; Gordana Ivosev; Lau Adam; Ron Bonner; *MDS Analytical Tech, Sciex, Concord, Canada*
- WP 225 **Trace Analysis (ppt) Via LC/MS/MS to Assess Removal of Various Pharmaceutical Compounds by Activated Carbon Based Drinking Water Filters;** Hong Jian Dai; Todd Branch; Peter Beerse; Stanley Cummins; Tom Huggins; *Procter & Gamble, Mason, OH*
- WP 226 **Comparison of Linear Ion Trap and Triple Quadrupole Mass Analyzer for Quantitation: An Antibiotics Case Study;** Susie Dai^{1,2}; Timothy Herrman^{1,2}; ¹*Office of the Texas State Chemist, College Station, TX*; ²*Texas A&M University, College Station, TX*
- WP 227 **Development and Validation of an LC-MS/MS Method for Farnesol Quantitation in Candida Albicans Biofilms;** Marie-Claude Denis; Karine Venne; Annie Leduc; Jean Barbeau; Alexandra Furtos; *Universite de Montreal, Montreal, Canada*
- WP 228 **HPLC/MS/MS with In-Source Collision-Induced Dissociation for Direct Measurement of PEGylated Compounds in Biological Matrices;** Mark Dreyer¹; Linda Chen¹; Dale Schoener²; Oanh Dang²; ¹*Elan Pharmaceuticals, South San Francisco, CA*; ²*Alta Analytical Laboratory, El Dorado Hills, CA*
- WP 229 **Quantification of Illegal Drugs in Urine Using Magnetic Nanoprobes and MALDI-TOF MS;** Chi-Yi Ho¹; Po-Chiao Lin²; Chun-Cheng Lin²; Ying-Wei Lu²; Mei-Chun Tseng³; Yu-Ju Chen³; Ming-Ren Fuh¹; ¹*Department of Chemistry, Soochow University, Taipei, Taiwan*; ²*Department of Chemistry, Tsing Hua University, Hsinchu, Taiwan*; ³*Institute of Chemistry, Academia Sinica, Taipei, Taiwan*
- WP 230 **500 Discovery Samples a Day: Maximizing Throughput and Minimizing Matrix Effects in Discovery Analysis;** Rob Horton; Gerard Dalglish; Edward Brewer; *Tandem Labs, West Trenton, NJ*
- WP 231 **Preparation of Quantum Dots and Concentration Measurements via ICP-MS for The Application of Neurotransmitter Sensing;** Jong Sung Kim; Jeong Ha Yoo; *Kyungwon University, Seongnam, South Korea*
- WP 232 **Summation of Multiple Transitions Monitoring in LC/MS/MS to Enhance Signal to Noise and to Reduce Variability;** François Viel; Isabelle M. Levesque; Sebastien Gagne; Sylvain Lachance; Philippe Belanger; Jean Couture; Ann Levesque; Robert Masse; *Anapharm, Québec, Canada*
- WP 233 **Quantitation without Standards via Electrosprayed Clusters: Determining Solution Molar Fractions of Peptides and Small Molecules;** Ryan D. Leib; Tawnya G. Flick; Evan R. Williams; *University of California, Berkeley, CA*
- WP 234 **Overcome Non-Phospholipid Related Matrix Effect and Continuing Improvement for the Quantification of Naltrexone and 6 β -Naltrexol in Human Plasma by LC/MS/MS;** Min Meng; Lin Tan; Troy Volker; Ryan Alder; Patrick Bennett; *Tandem Labs, Salt Lake City, UT*
- WP 235 **A Unique Approach for 'Top down Analysis' of Melamine in Herbal Matrix Using HCD and High Resolution Mass Spectrometry;** Ge Xiao Wei¹; Nargund Sandy²; Martina Monique²; ¹*Health Sciences Authority, Singapore, Singapore*; ²*Alpha Analytical [S] Pte Ltd, Singapore, Singapore*
- WP 236 **The Simultaneous Detection of Metabolites and Quantification of Drug Molecules in Bioanalytical Assays;** Rob Plumb¹; Paul Rainville¹; Joanne Mather²; Ian Wilson³; ¹*Waters, Milford, MA*; ²*waters corporation, Milford, MA*; ³*Astra Zeneca, Macclesfield, UK*
- WP 237 **Ways to Handle Matrix Effect in Quantitative Bio-Analysis in Real Time Analysis;** Ashutosh Pudage; Noel Gomes; *Accutest Research Laboratory, Navi Mumbai, India*
- WP 238 **Hydrophobic Interaction Chromatography (HILIC) Analysis of 6MPR For Targeted Drug Delivery to the Brain Using Gold Nanoparticles (AuNP) via LC/MS/MS;** Brian Rago; Julie Poe; Lisa Buchholz; Ayman El-Kattan; Charles Rotter; Manthena Varma; Paul Nkansah; *Pfizer, Groton, CT*
- WP 239 **Monitoring Matrix Interferences in Biological Samples Utilizing Dual Scan MRM Mode Mass Spectrometry;** Paul Rainville¹; Robert Plumb²; Joanne Mather³; ¹*Waters, Milford, MA*; ²*Imperial College, London, UK*; ³*waters corporation, Milford, MA*
- WP 240 **Development of the New Method for Quantitation and Screening Analysis of Organic Acids by Means of Using IC/MS/MS;** Kaori Saito¹; Tomoko Hamasaka¹; Yoko Yamagishi¹; Shigeru Sakamoto¹; Takahiro Suzuki²; ¹*Thermo Fisher Scientific K.K., Yokohama, Japan*; ²*Nippon Dionex K.K., Tokyo, Japan*
- WP 241 **Quantitative Bioanalysis using Time of Flight Mass Spectrometry and Fast Liquid Chromatography;** Gunnar Stenhagen; *AstraZeneca R&D, Mölndal, Sweden*
- WP 242 **Mass Spectrometry of Polydisperse Samples: A Simple Step-by-Step Approach to Insure Quantitation;** William E. Wallace; Charles M. Guttman; Kathleen M Flynn; *National Institute of Standards & Technology, Gaithersburg, MD*
- WP 243 **Successful Applications of Autosampler Needle Seat Back-Flush to Reduce Carryover Using Common HPLC Hardware When Standard Washing Procedures Are Ineffective;** Marie-Pierre Taillon; Nikolay Youhnovski; Simon Robert; Louis-Philippe Morin; Milton Furtado; Fabio Garofolo; *Algorithme Pharma Inc., Laval (Montreal), Quebec, Canada*
- WP 244 **Quadratic Behavior in Standard Curves in LC-MS/MS Bioanalytical Assays: Is a Wide Curve Range the Root Cause?** Long Yuan; Yunlin Fu; Anne-Françoise Aubry; Duxi Zhang; *Bristol-Myers Squibb, Princeton, NJ*
- WP 245 **Development of an Automation Assisted Generic Approach for LC-MS/MS Method Validation;** Jie Zhang; Shimin Wei; H Tom Smith; Francis Tse; *DMPK, Novartis Pharmaceuticals Corporation, East Hanover, NJ*

WEDNESDAY POSTERS

WP 246 **Multidimensional Molecular Identification by Laser Control Mass Spectrometry**; Xin Zhu; *East Lansing, MI*

CLINICAL CHEMISTRY, 247 - 275

WP 247 **Evaluation of 3-Iodothyronamine (TIAM) in Cell Preparation, Tissue Homogenates and Biological Fluids by HPLC-ESI-MS-MS**; Alessandro Saba¹; Grazia Chiellini²; Sabina Frascarelli²; Sandra Ghelardoni²; Maja Marchini²; Andrea Raffaelli³; Riccardo Zucchi²; ¹University of Pisa - Chemistry Dept., Pisa, Italy; ²University of Pisa - Medical School, Pisa, Italy; ³CNR ICCOM, Pisa, Italy

WP 248 **Application of Diels-Alder Derivatization and 96 Well Plate Solid Phase Extraction to Increase the Throughput of 25-Hydroxyvitamin D3 Analysis**; Pavel A. Aronov¹; Jun Yang²; Laura M. Hall²; Charles B. Stephensen²; Bruce D. Hammock²; ¹Stanford, Stanford, CA; ²University of California, Davis, Davis, CA

WP 249 **Rapid Analysis of Catecholamines and Metanephrines in Biological Fluids by Automated Online Solid-Phase Extraction LC/MS/MS**; Sylvie Beaudet¹; Martin Sibum²; Luce Boulanger³; ¹MDS Analytical Technologies, Concord, Canada; ²Spark Holland Inc., Emmen, Netherlands; ³CHUM St-Luc Hospital, Montreal, Canada

WP 250 **Development of a Reference Method for B6 Vitamin Pyridoxal 5'-Phosphate in Serum Using Isotope-Dilution Liquid Chromatography-Electrospray Ionization Tandem Mass Spectrometry**; Johanna E. Camara; Karen W. Phinney; *NIST, Gaithersburg, MD*

WP 251 **Determination of Plasma Free Metanephrines by On-Line Extraction and Hydrophilic Liquid Chromatography Coupled to Tandem Mass Spectrometry**; Karina Helena Morais Cardozo; Marlene Freitas Madeira; *Fleury Medicine and Health, São Paulo, Brazil*

WP 252 **Quantitation of Underivatized Acylcarnitines and Acyl CoA Fatty Acid Esters in Rat Tissue Samples Using Triple Quadrupole Mass Spectrometry**; James Carlson¹; Jenny Moshin¹; Susan Leonard¹; Yan Wang²; Irving Wainer²; ¹Applied Biosystems, Framingham, MA; ²NIH/NIA, Baltimore, MD

WP 253 **High-Throughput Isotope-Dilution Liquid Chromatography-Tandem Mass Spectrometry Assay for Simultaneous Measurement of Vitamins D2 and D3 25-Hydroxy Metabolites in Human Serum**; Valdemir Melechco Carvalho; Odete Hirata Nakamura; Marlene de Freitas Madeira; José Gilberto Vieira; *Fleury Medicine and Health, Sao Paulo, Brasil*

WP 254 **Detection of Specific Porphyrins Using Tandem Mass Spectrometry**; Autumn W. Burns; John Choiniere; Frantisek Turecek; Michael H. Gelb; C. Ronald Scott; *University of Washington, Seattle, WA*

WP 255 **Simple and Fast Method for Determination of Acetaminophen in Serum**; Jose Luiz Costa¹; Rafael Lanaro²; Anna Sylvia Ferrari Marques¹; Helio Martins¹; ¹Applied Biosystems, Sao Paulo, Brazil; ²Poison Control Center, Faculty of Medical, Campinas, Brazil

WP 256 **A LC-MS/MS Platform for the Simultaneous TDM Analysis of Opiates and Benzodiazepines with Direct Urine Injection**; Christopher L. Esposito¹; Francois A. Espourteille²; Matthew Berube²; ¹Thermo Scientific, Franklin, MA; ²Thermo Fisher Scientific, Franklin, MA

WP 257 **Free and Total Sialic Acid in CSF by UPLC-MS/MS**; Sabrina Forni; Xiaowei Fu; Raphael Schiffmann;

Lawrence Sweetman; *Inst. of Metabolic Disease, Baylor Res. Institute, Dallas, Texas*

WP 258 **Analysis of Antidepressants and Neuroleptics in Serum/Plasma by LC/MS/MS**; Tanya Gamble²; Tania A. Sasaki¹; Lisa Sapp¹; ¹Applied Biosystems, Foster City, CA; ²Applied Biosystems/MDS Analytical Technologies, Concord, Canada

WP 259 **Quantification of Plasma S-Adenosyl Homocysteine and S-Adenosyl Methionine by Stable Isotope Dilution Positive Ion ESI LC/MS/MS with On-Line Concentration**; David Hasman^{1,2}; Sheila M Innis²; ¹Procyon Research Inc., Vancouver, Canada; ²University of British Columbia, Vancouver, BC Canada

WP 260 **Analysis of Leukotriene B4 and Cysteinyl-Leukotrienes in Human Sputum**; Gloria P. Lazar; Xiaoyao Xiao; Arnaldo Pica-Mendez; Omar Laterza; Wesley K. Tanaka; *Merck & Company, Inc., Rahway, NJ*

WP 261 **Automated SPE-LC/MS/MS Assay for 25-OH Vitamin D Metabolites in Blood**; Kimberly Eaton¹; M. P. George²; Tony Brand²; Kimberly Gamble³; Ken Lewis¹; ¹OpAns, LLC, Durham, NC; ²Agilent Technologies, Santa Clara, CA; ³MicroLiter Analytical Supplies, Inc., Suwanee, GA

WP 262 **A New Software Application Enabling User Walk-up LC-MS Quantification of Immunosuppressants for the Clinical Laboratory**; Dennis G. Nagtalon; *Thermo Fisher Scientific, San Jose, CA*

WP 263 **Endogenous Prednisolone and Prednisone Interference Elucidation by Linear Ion Trap in a Clinical Assay**; Brian C Netzel; Ravinder J. Singh; Molly A. VanNorman; Tania A. Sasaki²; *Mayo Clinic, Rochester, MN*; ²Applied Biosystems

WP 264 **Improved Sensitivity in Mass Spectrometric Quantification of Cardiolipin in Human Serum by HPLC/ESI-MS**; Elizabeth W. Ogbonna¹; Hee-Yong Kim²; Alfred L. Yergey¹; Peter S. Backlund¹; ¹NICHD/NIH, Bethesda, MD; ²NIAAA/NIH, Bethesda, MD

WP 265 **An Isotope-Dilution GC/MS Method for the Quantitation of 25-Hydroxy-Vitamin D₃ in Human Serum**; Anna M. Przyborowska¹; Graham D. Carter²; Julia C. Jones²; John M. Halket^{1,2}; ¹King's College London, London, UK; ²Imperial College Healthcare NHS Trust, London, UK

WP 266 **In-Source Water Loss As a Source of Analytical Error in Vitamin D LC/MS/MS Quantitative Analysis**; Eduard Rogatsky; Daniel Stein; *Albert Einstein College of Medicine, Bronx, NY*

WP 267 **Simultaneous Determination of Alpha-Aminoadipic Semialdehyde, Piperidine-6-Carboxylate, and Picecolic Acid in Human Plasma by Liquid Chromatography-Mass Spectrometry**; Katerina Sadilkova¹; Si Houn Hahn^{1,2}; ¹Seattle Children's, Seattle, WA; ²University of Washington, Seattle, WA

WP 268 **Method Development for the Determination of 25-Hydroxyvitamin D3 and 25-Hydroxyvitamin D2 in Serum Using Isotope Dilution Liquid Chromatography-Tandem Mass Spectrometry**; Susan Tai; *NIST, Gaithersburg, MD*

WP 269 **Plasma Free Metanephrine and Normetanephrine Quantitation Using On-line Sample Extraction Coupled with Tandem Mass Spectrometry**; Yang Shi; Catherine Lafontaine; Tim Haney; Joseph J. Takarewski; Francois A. Espourteille; *Thermo Fisher Scientific, Franklin, MA*

WEDNESDAY POSTERS

- WP 270 **Increased Throughput of Vitamin D Analysis Using a Multiple Parallel LC-MS System;** Adrian Taylor; David Cox; Min J. Yang; John Gibbons; *MDS Analytical Technologies, Concord, Canada*
- WP 271 **Fast Analysis of 15 Endogenous Estrogens using Positive Ion Electrospray with Cumulative Multicolumn Sequential Chromatography for Low Femtogram Analysis;** Timothy D. Veenstra¹; Xia Xu¹; Haleem Isaaq¹; King Chan¹; Robert Classon²; William A Hedgepeth²; ¹*SAIC-Frederick, Inc., Frederick, MD*; ²*Shimadzu Scientific Instruments, Inc, Columbia, MD*
- WP 272 **A Novel Derivatization Reagent to Enhance the Detection Characteristics of Keto-Steroids via LC-MS;** Brian L. Williamson; Marjorie Minkoff; Scott B. Daniels; Subhakar Dey; Babu Purkayastha; *Applied Biosystems, Framingham, MA*
- WP 273 **High-Throughput Analysis of Serum 5 α -Dihydrotestosterone by 2D-LC-MS/MS;** Bingfang Yue¹; Mark M. Kushnir¹; A Wayne Meikle^{1,2}; Alan L. Rockwood^{1,3}; ¹*ARUP Laboratories, Salt Lake City, UT*; ²*Dept. Medicine and Pathology, University of Utah, Salt Lake City, UT*; ³*Dept. of Pathology, University of Utah, Salt Lake City, UT*
- WP 274 **Simultaneous Screening, Quantitation and Confirmation of Regulated Chemicals for the Treatment of Erectile Dysfunction in Dietary Supplements;** Hwami Lee¹; Hansoon Kwon³; Sunghoon Yeo³; Jiehui Hu²; Huaien Zhu²; Yongming Xie²; Sanghwa Kim³; Myunghee Kang¹; Youngmi Jang¹; ¹*Korea Food & Drug Administration, Incheon, South Korea*; ²*Applied Biosystems I, Shanghai, China*; ³*Applied Biosystems, Seoul, South Korea*
- WP 275 **Detection and Quantification of the Endocrine Disruptor Clomiphene Citrate in Serum and Meconium by LC-ESI-MSn;** Justin Lygrisse; Kelsey Witherspoon; Michael J. Van Stipdonk; *Wichita State University, Wichita, KS*
- WP 276 **Methodological Development for Mural Painting Ageing Study;** Sophie Dallongeville; Sylvia Turrell; Christian Rolando; Caroline Tokarski; *Univ. des Science/Tech de Lille, Villeneuve D'ascq, France*
- WP 277 **Proteomics and Redox Proteomics Analyses to Understand the Role of Oxidative Stress in Immunosenescence of Aging Mice;** Renā A. Sowell; D. Allan Butterfield; *University of Kentucky, Lexington, KY*
- WP 278 **Top-Down Identification of Protein Modifications Induced by Cigarette Smoke Condensate;** Pauline Le Faouder¹; Iman Emami²; Caroline Tokarski¹; Christian Rolando¹; ¹*Univ. des Science/Tech de Lille, Villeneuve D'ascq, France*; ²*Biosyntech, Paris, France*
- WP 279 **Post-Translational Modifications of Model Proteins with 4-Hydroxynonenal, a Quantitative Analysis of Reactivity at Specific Sites;** Qingyuan Liu; Scott Gronert; *Virginia Commonwealth University, Richmond, VA*
- WP 280 **Identification and Characterization of 3-Nitrotyrosine Modified Proteins in Cerebrospinal Fluid;** Ashley Beasley¹; Avindra Nath¹; Robert J. Cotter²; ¹*Johns Hopkins University School of Medicine, Baltimore, MD*; ²*Middle Atlantic MS Laboratory, Baltimore, MD*
- WP 281 **Modification Specific Proteomics: Specific Enrichment and Identification of Carbonylated Sites in Proteins;** Angela Pereira Da Rocha; Adelina Rogowska-Wrzesinska; Kenneth Bendix Jensen; Peter Roepstorff; *University of Southern Denmark, Odense, Denmark*
- WP 282 **Primary Sequence and Site-Selective Hydroxylation of Prolines in Isoforms of the Peanut Allergen Protein Ara h 2;** Jinxi Li¹; Kevin J. Shefcheck²; John H. Callahan²; Catherine Fenselau¹; ¹*University of Maryland, College Park, MD*; ²*FDA/CFRAN, College Park, MD*
- WP 283 **High-Content Quantitation of the S-Nitrosylated Proteins in Parkinson's Disease Paradigms;** Fanjuan Meng^{1,2}; Fan Wei²; Siqi Liu²; Zezong Gu^{1,3}; ¹*University of Missouri-Columbia School of Medicine, Columbia, MO*; ²*Chinese Academy of Sci Beijing Genomics Institute, Beijing, China*; ³*Burnham Institute for Medical Research, La Jolla, CA*
- WP 284 **Optimization of a 2DE-Based Biotin Switch Method for Proteomics Analysis of Nitrosylated Proteins;** Changgoog Wu; Tong Liu; Cexiong Fu; Wei Chen; Mohit Jain; Hong Li; *UMDNJ, Newark, NJ*
- WP 285 **Identification of Sites and Tissue-Dependent Protein Targets for Posttranslational Modifications by 4-Hydroxy-2-Nonenal, an End-Product of Lipid Peroxidation, in the Mitochondria;** Navin Rauniyar; Katalin Prokai-Tatrai; Laszlo Prokai; *UNT Health Science Center, Fort Worth, TX*
- WP 286 **Characterization and Performance of a Multicomponent Protein Mixture for the Analysis of Tyrosine Nitration Using Several Mass Spectrometry Platforms;** Bensheng Li; Birgit Schilling; Jason M. Held; Bradford W. Gibson; *Buck Institute for Age Research, Novato, CA 94945*
- WP 287 **Quantitative Profiling of Site-Specific Hydroxylation on the Hypoxia-Inducible Factors HIF1 α and HIF2 α** Dean E. McNulty; Melissa B. Pappalardi; Lusong Luo; Roland S. Annan; *GlaxoSmithKline, King of Prussia, PA*
- WP 288 **Nitrated Fibrinogen: A Novel Risk Factor for Deep Venous Thrombosis;** Marissa Martinez¹; Giannis Parastatidis²; Ian A. Blair³; Harry Ischiropoulos²; ¹*University of Pennsylvania, Philadelphia, PA*; ²*Childrens Hospital of Philadelphia, Philadelphia, PA*; ³*Univ. of Penn/SOM/Pharmacol, Philadelphia, PA*
- WP 289 **Label-Free Strategy for Site-Specific Quantitation of S-Nitrosylome;** Hsiao-Chiao Chou^{1,3}; Yi-Ju Chen^{2,3}; Wei-Chi Ku³; Yu-Ju Chen³; ¹*Department of Chemistry, NTU, Taipei City, Taiwan*; ²*IBS, National Taiwan University, Taipei City, Taiwan*; ³*Institute of Chemistry, Academia Sinica, Taipei City, Taiwan*
- WP 290 **A Strategy for Direct Identification of Protein S-Nitrosylation Sites by Quadrupole Time-of-Flight Mass Spectrometry;** Tong Liu; Yan Wang; Changgong Wu; Hong Li; *UMDNJ, Newark, NJ*
- WP 291 **Peroxynitrite-Mediated Oxidative Post-Translational Modifications of Mitochondrial Complex II in the Post-Ischemic Myocardium;** Liwen Zhang; Chwen-Lih Chen; kari. B Green-Church; Yoeng-Renn Chen; *Ohio State University, Columbus, OH*
- WP 292 **Mass Spectrometry-Based Site-Specific Identification of S-Nitrosylome in Cardiovascular System;** Yi-Ju Chen^{1,2}; Hsiao-chiao Chou^{2,3}; Wei-Chi Ku²; Kay-hooi Khoo^{1,4}; Yu-Ju Chen²; ¹*IBS, National Taiwan University, Taipei City, Taiwan*; ²*Institute of Chemistry, Academia Sinica, Taipei City, Taiwan*; ³*Institute of Chemistry, National Taiwan University, Taipei City, Taiwan*; ⁴*IBC, Academia Sinica, Taipei City, Taiwan*

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- WP 294 **Analysis of Arginine and Lysine Methylation using Electron Transfer Dissociation Mass Spectrometry and Peptide Separations at Neutral pH;** Ambrosius PL Snijders; Ming-Lung Hung; Stuart A Wilson; Mark J Dickman; *University of Sheffield, Sheffield, UK*
- WP 295 **Towards the Development of a Method for the Quantitation of Methylation to Lysine Residues in Proteins;** Anthony Berardinelli¹; Bruce Snyder²; Amanda Bryant-Friedrich¹; Wendell P. Griffith¹; ¹*University of Toledo, Toledo, OH*; ²*Emmanuel Christian High School, Toledo, OH*
- WP 296 **Post-Translational Modifications on the Subunit p65 of NFkB;** Benlian Wang¹; Tao Lu²; Masaru Miyagi¹; George R. Stark²; Mark Chance¹; ¹*Case Western Reserve University, Cleveland, OH*; ²*Lerner Research Institute, Cleveland, OH*
- WP 297 **An Unusual Case Study: MS/MS Spectrum of a Lysine-Methylated Peptide Looks Almost Perfectly Like That of a Serine Methylated Peptide;** Junmei Zhang¹; Yue Chen²; Zhihong Zhang²; Joanna Wysocka³; Yingming Zhao⁴; ¹*University of Texas Southwestern Medical Center, Dallas, TX*; ²*University of Chicago, Chicago, IL*; ³*Stanford University, Stanford, CA*; ⁴*The University of Chicago, Chicago, IL*
- WP 298 **Microtubules of Toxoplasma Gondii Contain C-Terminal Methylated α - and β -Tubulins;** Hui Xiao¹; Kamal El Bissati¹; pascal Verdier-Pinard²; Kami Kim¹; Berta Burd¹; Ruth Hogue Angeletti¹; Louis M. Weiss¹; ¹*Albert Einstein College of Medicine, Bronx, NY*; ²*Aix-Marseille Université, Marseille cedex, France*
- WP 299 **Screening of Ubiquitin K11 Linkage Specific Substrates by Quantitative Differential Display Proteomics Approach;** Ping Xu¹; Duc Duong¹; Nicholas Seyfried²; D. Jessica Cheng¹; John Rush³; Mark Hochstrasser⁴; Daniel Finley⁵; Junmin Peng¹; ¹*emory university, Atlanta, GA*; ²*Department of Human Genetics, Atlanta, GA*; ³*Cell Signaling Technology, Danvers, MA*; ⁴*Yale University, New Haven, CT*; ⁵*Harvard University, Boston, MA*
- WP 300 **Identification of EGF-Stimulation Specific PCM1 Interaction Partners by Quantitative Proteomics;** Vyacheslav Akimov; Kristoffer T. G. Rigbolt; Blagoy Blagoev; *Uni. of Southern Denmark, Odense, Denmark*
- WP 301 **Characterisation of SUMOylated RanGAP1 by Ion Mobility/Time of Flight Mass Spectrometry;** Mark Skehel; Helen Flynn; Sarah Maslen; *Cancer Research UK, Hertfordshire, UK*
- WP 302 **Mapping Endogenous SUMO Sites: A Novel Approach Using ESI-MS and Modified Database Search with Common Search Engines;** He-Hsuan Hsiao¹; Erik Meulmeester²; Benedikt T.C. Frank³; Frauke Melchior²; Henning Urlaub¹; ¹*Bioanalytical Mass Spectrometry Group, MPIIbpc, Goettingen, Germany*; ²*Faculty of Medicine, University of Goettingen, Goettingen, Germany*; ³*Department of NMR Based Structural Biology, MPIIbpc, Goettingen, Germany*
- WP 303 **Proteomic Analysis of SUMOylated Proteins in Mammalian Cells;** Xiaoyan Liu; Fujian Zhang; Jianjun Zhai; Haining Zhu; *University of Kentucky, Lexington, KY*
- WP 304 **A Quantitative Proteomics Approach to Characterize A Cellular TDP-43 Proteinopathy Model;** Nicholas Seyfried^{1,3}; Yair M. Gozal^{2,3}; Qiangwei Xia^{1,3}; Duc Duong^{1,3}; Allan I. Levey^{2,3}; James J. Lah^{2,3}; Junmin Peng^{1,3}; ¹*Department of Human Genetics, Atlanta, GA*; ²*Department of Neurology, Atlanta, GA*; ³*Emory University, School of Medicine, Atlanta, GA*
- WP 305 **Quantitative Identification of Acyl Modifications in SDS Resistant Pellets of S. Cerevisiae;** Hongying Zhong; Jianjian Li; Yingxia Yue; *Central China Normal University, Wuhan, China*
- WP 306 **Probing Huntingtin Palmitoylation Sites by Mass Spectrometry;** Fiona BJ Young^{2,3}; Michael R Hayden^{2,3}; Bernd O Keller^{1,3}; ¹*University of British Columbia, Vancouver, Canada*; ²*UBC-CMMT, Vancouver, BC*; ³*UBC-Child&Family Res. Institute, Vancouver, BC*
- WP 307 **GPiomics: Global Analysis of Glycosylphosphatidylinositol (GPI)-Anchored Molecules of Trypanosoma cruzi by Tandem Mass Spectrometry;** Ernesto S. Nakayasu¹; Dmitry V. Yashunsky²; Lilian L. Nohara¹; Ana C.T. Torrecilhas³; Andrei V. Nikolaev²; Igor C. Almeida¹; ¹*University of Texas at El Paso, El Paso, TX*; ²*University of Dundee, Dundee, UK*; ³*University of Sao Paulo, Sao Paulo, Brazil*
- WP 308 **Identification and Profiling of Novel Fatty Acid Modifications to Lens Major Intrinsic Protein AQP0;** Zhen Wang¹; Danielle B Gutierrez²; Angus C Grey¹; Kevin L Schey¹; ¹*Vanderbilt University, Nashville, TN*; ²*Medical University of South Carolina, Charleston, SC*

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- WP 310 **Single Large Biomolecular Ion Detection;** Chien-Hsun Chen¹; Jung-Lee Lin¹; Ming-Lee Chu²; Yi-Sheng Wang¹; Chung-Hsuan Chen¹; ¹*Genomics Research Center, Academia Sinica, Taipei, Taiwan*; ²*Institute of Physics, Academia Sinica, Taipei, Taiwan*
- WP 311 **M2 Ion Detector for High Speed and Wide Dynamic Range;** Motohiro Suyama; *Hamamatsu Photonics K.K., Iwata, Japan*
- WP 312 **Improvements in Charge Detection Mass Spectrometry;** Joshua Maze; Lloyd Zilch; John Smith; Nathan C. Contino; Haitao Tu; George E. Ewing; Martin Jarrold; *Indiana University, Bloomington, IN*
- WP 313 **Increased Quantitative Throughput and Selectivity for Triple Quadrupole Mass Spectrometry Based Assays Using Intelligent SRM (iSRM);** Reiko Kiyonami¹; Alan E. Schoen¹; Amol Prakash¹; Huy Nguyen¹; Scott Peterman¹; Vlad Zabrouskov¹; Charles T. Yang¹; Dipankar Ghosh¹; Kristi D. Akervik¹; Nathalie Selevsek²; Andreas F Huhmer¹; Bruno Domon²; ¹*ThermoFisher Scientific, San Jose, CA*; ²*ETH Zurich, Zurich, Switzerland*
- WP 314 **Web-Enabled Management of an Ionization Source and Data Processing with the Apple iPod Touch;** Peter Leopold¹; Elizabeth Crawford²; Joseph Tice²; Michael Festa²; ¹*BioAnalyte Inc., Portland, ME*; ²*IonSense, Inc., Saugus, MA*
- WP 315 **RePlay® Combined with an Exclusion List Script Significantly Improves Number of Protein Assignments from Complex Proteomic Samples;**

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- WP 316 **The Sensitivity of Laser-Induced Acoustic Desorption/Electron Ionization in a Fourier Transform Ion Cyclotron Resonance Mass Spectrometer**; Zhicheng Jin¹; Hilkka Kenttamaa²; ¹Purdue University, West Lafayette, IN; ²Chemistry Department, West Lafayette, IN
- WP 317 **Development of Multiplexed Protein Separation and Identification Using Digital Microfluidics and Mass Spectrometry**; Adam A. Stokes; Yifan Li; William Parkes; David J. Clarke; Pat Langridge-Smith; C. Logan Mackay; Anthony J. Walton; *The University of Edinburgh, Edinburgh, Scotland*
- WP 318 **Development of an Integrated High-Pressure Microfluidic Nano-LC Platform**; James Murphy; Geoff Gerhardt; Angela Doneanu; Jay Johnson; Joseph Michienzi; Keith Fadgen; *Waters Corporation, Milford, MA*
- WP 319 **High Efficiency Mass Spectrometry Systems with Discontinuous Atmospheric Pressure Interface**; Nicholas A. Charipar; Jason D. Harper; Matthew A. Kirleis; Wei Xu; Zheng Ouyang; *Purdue University, Lafayette, IN*
- WP 320 **In-Source Atmospheric Pressure-Electron Capture Dissociation (AP-ECD): A New Tool for Structural Characterization of Peptides**; Damon Robb¹; Jason Rogalski¹; Juergen Kast¹; Michael Blades²; ¹University of British Columbia, Vancouver, Canada; ²University of British Columbia, Vancouver, BC
- WP 321 **Online Bioaffinity- Electrospray Mass Spectrometry: Combining Molecular Identification and Bioaffinity Quantification in Biopolymer Interactions**; Michaël Przybylski¹; Mihaela Dragusanu¹; Stefan Slamnoi¹; Alina Petre¹; Tingting Tu²; Michael L. Gross²; ¹University of Konstanz, Konstanz, Germany; ²Washington University, Saint Louis, MO
- WP 322 **Electrochemistry / Electrospray Mass Spectrometry for Investigation of Reaction Kinetics**; Bogusław Pozniak; Richard B. Cole; *University of New Orleans, New Orleans, LA*
- WP 323 **Theoretical Studies of the Effect of Swirling Flow on Ion Focusing in a Coaxial Flow Electrospray Ion Source**; Serguei Savtchenko²; Lisa Cousins²; Nasser Asgriz¹; ¹University of Toronto, Toronto, ON, Canada; ²IONICS Mass Spectrometry Group Inc., Toronto, ON
- WP 324 **Simulations for Determining Mass Spectral Quality from μ -Cylindrical Ion Traps Using a Hard-Sphere Collision Buffer Gas Model**; Friso H. W. van Amerom; Ashish Chaudhary; Tim Short; *SRI International, St Petersburg, FL*
- WP 325 **A Carbon Nanotube Ionization Source for a Low Power Ion Trap Mass Spectrometer for Martian Organic Analysis**; Theresa Evans-Nguyen¹; Charles Parker²; Christina Hammock³; Vladimir M. Doroshenko⁴; Jeffrey Glass²; Luann Becker⁵; Robert J. Cotter¹; ¹Johns Hopkins School of Medicine, Baltimore, MD; ²Duke University, Durham, NC; ³Johns Hopkins Applied Physics Lab, Laurel, MD; ⁴MassTech, Inc., Columbia, MD; ⁵Johns Hopkins University, Baltimore, MD
- WP 326 **A Rotating Ball LC/SALDI Interface Surface Activation and Analytical Performance**; Sergey Alimpiev³; Alexander Gretchnikov²; Jan Sunner¹; Sergey Nikiforov³; Yaroslav Simanovsky³; ¹University of Portsmouth, Portsmouth, UK; ²Vernadsky Inst Geochem Anal Chem, Russ Acad Sci, Moscow, Russia; ³Prokhorov General Physics Inst Russ Acad Sci, Moscow, Russia
- WP 327 **Automated Vacuum Compatible Sample Positioning Device for Imaging Mass Spectrometry**; Konstantin Aizikov¹; Donald Smith²; David A. Chargin³; Sergei Ivanov³; David H. Perlman⁴; Tzu-yung Lin⁵; Nadezda P. Sargaeva⁵; Ron M.A. Heeren⁶; Peter B. O'Connor⁷; ¹BUSM Mass Spectrometry Re, Boston, MA; ²FOM-AMOLF, Amsterdam, Netherlands; ³Fraunhofer CMI, Boston, MA; ⁴Boston U. Sch. of Medicine, Boston, MA; ⁵Boston University, Boston, MA; ⁶FOM Inst. Atomic/Molecular Phy, Amsterdam, Netherlands; ⁷University of Warwick, Coventry, UK
- WP 328 **No Portable Mass Spec Required: Adaptive Sampling in the Field Using a Portable Automated Purification Robot with Lab MS ID**; David Fries; Brian Gregson; Geran Barton; Stan Ivanov; *U South Florida, St Petersburg, FL*

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- WP 329 **Compatibility of UHPLC with MS, Are We More Productive?** Marc Elliott¹; Sean Mchugh¹; Mark Woodruff²; Ken Butchart²; ¹Resolution Analytical Systems, Holland, MI; ²Fortis Technologies Ltd, Neston, UK
- WP 330 **Open Access with Open Arms: Implementation of a Single System that Meets the Varying Needs of Different Compounds**; Zachary S Giles; *GlaxoSmithKline, Rtp, NC*
- WP 331 **A Postcolumn Device for Signal Intensity Improvement of Peptides in TFA-containing Mobile Phase LC/MS**; Nan-Hsuan Wang; Wan-Li Lee; Guor-Rong Her; *National Taiwan University, Taipei, Taiwan*
- WP 332 **LC-MS/MS Bioanalysis of Variety of Pharmaceutical Compounds in High-pH Mobile Phases**; Jian Wang; Mohammed Jemal; *Bristol-Myers Squibb, Princeton, NJ*
- WP 333 **Development of a Desalting Interface for LC/MS Mobile Phase Containing Non-volatile Salts**; Yutaka Takahashi^{1,2}; Kanae Teramoto¹; Kazumi Yoshida³; Kazuhiro Chiba³; ¹JEOL, Tokyo, Japan; ²TUAT-TLO. Co. Ltd, Tokyo, Japan; ³Tokyo University of Agriculture and Technology, Tokyo, Japan
- WP 334 **Reduce Column Related Carryover for Bioanalysis by Alternating the Column Flow Direction in LC/MS/MS**; Susan Chen; Ji Zhang; Debra Liao; Michael Johnson; Shaoxia Yu; Justin Gordon; Jing-Tao Wu; Mark Qian; *Millennium: The Takeda Oncology Company, Cambridge, MA*
- WP 335 **Novel Automated Online Column Switching HILIC-RP-LC/MS Method for the Analysis of Complex Samples**; Egidijus Machtejevas¹; Sven Andrecht¹; Robertus Hendriks¹; Klaus K. Unger²; ¹Merck KGaA, Darmstadt, Germany; ²Johannes Gutenberg University, Mainz, Germany
- WP 336 **A Novel Micro-Affinity Column for LC ICP-MS Analysis of Trace Metalloproteins in Bio-Fluids**; Sabrina Tachdjian²; Naoki Furuta¹; Kazunori Iwata³; Takashi Kotsuka³; ¹Chuo University, Tokyo, Japan; ²Showa Denko America, Inc., New York, NY; ³Showa Denko KK, Tokyo, Japan
- WP 337 **Method Development Strategies for Ultra High-Throughput LC-MS/MS Analysis of Small Polar Molecules Utilizing HILIC Mechanisms**; Brian

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WP 339 **Identification and Separation of an Environmental Contaminant (Synephrine) During the Measurement of Free Phenylephrine in Human Plasma using ESI-HILIC-LC/MS/MS**; Michael P. Waldron; Jordan Honrine; Patricia E. Paterson; Bruce Hidy; Rand G. Jenkins; *PPD, Richmond, VA*

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WP 342 **High Throughput Qualitative and Quantitative LC/MS Analyses Based on Fused-Core™ Columns**; Nelson Huang; Peter Tate; Ning Pan; Franklin Schlerman; Oliver McConnell; *Wyeth, Cambridge, MA*

WP 343 **Recent Advancements in Accelerated Bioanalytical LC/MS Using Fused-Core Columns**; Richard L. Beardsley; Ethan R. Badman; Zhenmin Liang; Surendra Bansal; *Hoffmann-La Roche Inc., Nutley, NJ*

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WP 352 **Comparing ESI and APCI Sources to Screen Dairy-Based Foods for Melamine by Rapid On-line Extraction with LC-MS/MS**; Joseph Di Bussolo¹; Rory Rohm²; ¹*Thermo Fisher Scientific, West Chester, PA*; ²*West Chester University of PA, West Chester, PA*

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WP 355 **Understanding the Role of Oleic Acid and Its Metabolite in Atherosclerosis by Determining Their Levels in Human Plasma Using SPE-LC-MS/MS**; Huiling Liu¹; Qunjie Wang¹; Changyong Xue²; Yinghua Liu²; Jin Wang²; Yuehong Zhang²; Xiaoxing Lv²; Junyan Zhang¹; Jie Liao²; ¹*Agela Technologies Inc, Newark, NJ*; ²*General Hospital of Chinese PLA, Beijing, China*

WP 356 **Impact of Side Reactions Involving Strong Cation Exchange SPE Mechanism on Bioanalytical Assay Accuracy by Using LC-MS/MS**; Catherine Fontaine; Jean-Nicholas Mess; Milton Furtado; Fabio Garofolo; *Algorithme Pharma Inc., Laval (Montreal), Quebec, CANADA*

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WP 358 **Analysis of Drugs of Abuse Using Automated Disposable Pipette Extraction and LC/MS/MS**; Fred Foster¹; William Brewer²; Sparkle Ellison²; Stephen Morgan²; Tom Gluodenis³; ¹*Gerstel, Inc., Linthicum, MD*; ²*University of South Carolina, Columbia, SC*; ³*Agilent Technologies, Wilmington, DE*

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WP 361 **Characterization of Peptide-Hormone Somatostatin Using Different Tandem Mass Spectrometry Methods**; Marija Mentinova; Hongling Han; Scott A. McLuckey; *Purdue University, West Lafayette, IN*

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- WP 365 **Fragmentation of Intermolecular Cross-Linked Peptides by ECD and IRMPD**; Luiz Fernando Arruda Santos; Amadeu H Iglesias; Fabio C Gozzo; *IQ - University of Campinas, Campinas, BRAZIL*
- WP 366 **TxXIIIA, an Atypical Homodimeric Conotoxin Found in the *Conus textile* Venom**; Loic Quinton¹; Nicolas Gilles²; Edwin De Pauw¹; ¹*University of Liege, Liège, Belgium*; ²*CEA, iBiTec-S, SIMOPRO, Gif-sur-Yvette, France*
- WP 367 **Characterization of Peptides Linked by Disulfide-containing Crosslinkers with Various Tandem Mass Spectrometric Approaches**; Tyler J. Greer; Bo Wang; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*
- WP 368 **Characterization of Peptides from Skin Secretions of Amphibians by Composition-Based de novo Sequencing**; Markus Langsdorf¹; Alireza Ghassempour²; Andreas Roempp¹; Bernhard Spengler¹; ¹*Justus Liebig University, Giessen, Germany*; ²*Shahid Beheshti University, Tehran, Iran*
- WP 369 **Sequencing of Peptides Produced in the Process of Mimicking Prebiotic Syntheses from Amino Acids by Thermocycling**; Alexey Kononikhin^{1,3}; Olga Demina³; Erast Kunenkov²; Andrey Khodonov³; Maria Indeykina²; Igor Popov^{1,3}; Sergey Varfolomeev^{2,3}; Eugene Nikolaev^{1,3}; ¹*The Institute for Energy Problems of Chemical Phys, Moscow, Russian Federation*; ²*Lomonosov Moscow State University, Moscow, Russian Federation*; ³*Emanuel Institute of Biochemical Physics, Moscow, Russian Federation*
- WP 370 **New Insights into Human Chromium Binding Peptides**; Heather Watson; Yuan Chen; Carolyn J. Cassady; John B. Vincent; *University of Alabama, Tuscaloosa, AL*
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- WP 371 **Identification of a Novel Wasp Venom Peptide via Micro-Scale Chemical Modifications and Tandem Mass Spectrometry**; Zhihua Yang; Athula B. Attygalle; Václav Čefovský; *Stevens Institute of Technology, Hoboken, NJ*
- WP 372 **Natural Product Screening and Identification Using a Combination of High-throughput UPLC-TOF and Hybrid Linear Ion Trap - FTMS LC/MS**; Jeffrey R. Gilbert; Paul Lewer; Dennis O. Duebelbeis; Don R. Hahn; *Dow AgroSciences, Indianapolis, IN*
- WP 373 **Mass Spectrometric Analysis of Polyketide Biosynthesis: Direct Infusion FTICR-MS Versus Low-Resolution LC-MS for Analysis of Active-Site Bound Intermediates**; Christopher M Rath; David H Sherman; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*
- WP 374 **Structural Characterization of New Statin-Like Flavonoid Glycosides in Citrus Bergamia by High Resolution Mass Spectrometry**; Leonardo Di Donna; Giuseppina De Luca; Anna Napoli; Fabio Mazzotti; Domenico Taverna; Giovanni Sindona; *Università della Calabria, Dipartimento di Chimica, Arcavacata di rende (CS), Italy*
- WP 375 **High-Resolution TOF LC/MS Characterization of the Enzymatic Glycosylation of Stevia Rebaudiana: A Comparison of Natural and Enzyme-Treated Stevia Extracts**; Katrina Emmel¹; Ted Waszkuc¹; Susan Kraemer-Berkman¹; Andre Szczesniowski²; Sue D'antonio²; ¹*NOW Foods, Bloomingdale, IL*; ²*Agilent Technologies, Schaumburg, IL*
- WP 376 **The Development of a New Algorithm for Empirical Formula Calculations Based On Multiple Molecular Ion Data**; Ichiro Hirano¹; Yusuke Inohana¹; Yutaro Yamamura¹; Norio Mukai¹; Michizane Hashimoto²; Neil Loftus³; John Warrander³; ¹*Shimadzu Corporation, Kyoto, Japan*; ²*Astellas Pharma Inc., Tsukuba, Japan*; ³*Shimadzu ISS, Manchester, UK*
- WP 377 **High Precision Molecular Formula Determinations of Phytochemicals in Plant Extracts using the Isotope Fine Structure obtained by 15T FT-ICR MS**; Jang Mi Jin; Kyu Hwan Park; Dong Wan Lim; Jong Shin Yoo; Hyun Sik Kim; *Korea Basic Science Institute, Daejeon, South Korea*
- WP 378 **Characterization of Phenolic Compounds in Almond Agricultural Wastes by Negative Ion ESI LC/MS for Potential Nutraceutical Applications**; Carina Minardi; Crisand Anderson; Anuradha Prakash; Christine A. Hughey; *Chapman University, Orange, CA*
- WP 379 **Developmental Validation for the Simultaneous Quantification of Multiple Bioactive Polyphenolic Compounds in Herbal Extracts by a High Throughput LC-MS/MS Method**; Xiao Chuan Li^{1,2}; Kim B. Plath²; Richard E. Staub³; Uwe Christians^{1,2}; Isaac Cohen³; Yan Ling Zhang^{1,2}; ¹*Univ. of Colorado Health Science, Aurora, CO*; ²*bioNovo CO, Aurora, CO*; ³*bioNovo CA, Emeryville, CA*
- WP 380 **Determination of Cytotoxic Alkaloids in Houttuynia Cordata by Liquid Chromatography/Electrospray Ionization-Tandem Mass Spectrometry**; Fang-Ju Chou; Ting-Ting Jong; Maw-Rong Lee; *National Chung Hsing University, Taichung, Taiwan*
- WP 381 **Determination of Digoxin and Digitoxin by Electrospray Ionization Ion Trap Time-Of-Flight Tandem Mass Spectrometry**; Kang Ma²; Leren Wan¹; Jing Dong¹; Hashi Yuki¹; Li Hongmei²; ¹*Shimadzu Shanghai Office, Shanghai, China*; ²*National Institute of Metrology of China, Beijing, China*
- WP 382 **Use of GC-QTOF MS to Identify Unknown Compounds in Herbal Extracts**; Viorica Lopez-Avila; Adrian P. Land; George Yefchak; *Agilent Laboratories, Santa Clara, CA*
- WP 383 **Identification & Confirmation of Hydrolysable Tannins from Phyllagathis Preatermissa with Coupling of NMR & FTMS**; Hooi Poay Tan^{1,2}; Sui Kong Ling¹; Cheng Hock Chuah²; Hun Teong Cheah³; ¹*Forest Research Institute Malaysia, Kepong, Selangor*; ²*University of Malaya, Kuala Lumpur, W.Persekutuan*; ³*Alpha Analytical Malaysia, Shah Alam, Malaysia*
- WP 384 **Tandem Mass Spectrometric Characterization of Echinomycin and Related Compounds**; Takemichi Nakamura¹; Kenji Watanabe²; Hiroki Oguri³; Hideaki Oikawa³; Hiroyuki Koshino¹; ¹*RIKEN, Wako, Japan*; ²*Okayama University, Okayama, Japan*; ³*Hokkaido University, Sapporo, Japan*
- WP 385 **A Shotgun Approach for Profiling Traditional Chinese Medicine Samples Using UPLC/TOF MSE Coupled with Multi-Variant Statistical Data Analysis**; Kate Yu¹; Baijing Ma²; John P. Shockcor¹; Jose Castro-perez¹; Heshui Yu²; Liping Kang²; Jie Zhang²; Yue Gao²; ¹*Waters Corp, Milford, MA*; ²*Beijing Institute of Radiation Medicine, Beijing, China*

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- WP 386 **PCA Analysis of MS Spectroscopic Fingerprints to Differentiate Skullcap (*Scutellaria lateriflora*) from Germanders (*Teucrium canadense*, *T. chamaedrys*);** Pei Chen¹; Fenhong Song²; James Harnly¹; Longze Lin¹; ¹USDA, Beltsville, MD; ²FDA, Lenexa, KS
- WP 387 **Multidimensional Scaling (MDS) of Matrix Assisted Laser Desorption/Ionization Mass Spectra to Evaluate Hydrolysable Tannins and Anthocyanins;** Rachael Leverage; Martha M. Vestling; Jess D. Reed; University of Wisconsin, Madison, WI
- WP 388 **Microbial Volatile Organic Compounds of *Aspergillus* sp;** Takae Takeuchi^{1,2}; Haruna Tanaka²; Takahito Suzuki²; Shin-ich Iwaguchi²; Sachiyo Kaneko²; Masato Kiuchi¹; Masako Iwamatsu¹; Mamoru Okubo³; Takaomi Matsutani⁴; Yoshinori Hosokawa⁵; Yoshio Hashimoto⁶; Hajime Ishitani⁶; ¹National Institute of Advanced Industrial Science, Ikeda, Osaka, Japan; ²Nara Women's University, Nara, JAPAN; ³Soda Kogyo Co., Ltd., Higashi-Osaka, Japan; ⁴Kinki University, Higashi-Osaka, Japan; ⁵X-ray Precision, Inc., Kyoto, Japan; ⁶Shinnihonden Co.Ltd., Osaka, Japan
- WP 389 **Quantitation of Pterostilbene in Blueberry Juice by Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry and Isotope Dilution;** Fabio Mazzotti¹; Hicham Benabdelkamel¹; Bartolo Gabriele²; Leonardo Di Donna¹; Anna Napoli¹; Giovanni Sindona¹; ¹Università della Calabria, Dipartimento di Chimica, Arcavacata Di Rende, ITALY; ²Facoltà di Farmacia e Scienze della Nutrizione e, Rende, Italy
- WP 390 **Analysis of the Skin Secretion of *Odorrana Schmackeri*, the Chinese Odorous Frog;** Martijn Pinkse¹; Geisa Caprini¹; Tianbao Chen²; Chris Shaw²; Peter Verhaert¹; ¹Delft University of Technology, Delft, Netherlands; ²School of Pharmacy, Queen's University of Belfast, Belfast, UK
- WP 391 **Direct Live Plant Molecular Analysis of Single Cell from Different Tissues;** Mónica Lorenzo Tejedor; Hajime Mizuno; Naohiro Tsuyama; Takanori Harada; Tsutomu Masujima; Hiroshima Univ. BioMed., Hiroshima, JAPAN
- WP 392 **Elucidation of the Mass Fragmentation Processes of the Polyether Marine Toxins, Dinophysistoxins, with Isomer Discrimination using Sodiated Adduct Ions;** Kevin James; Bebhine Carey; zuzana skrabakova; ambrose furey; Proteobio, Cork, Ireland
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- WP 393 **Highly Efficient Phosphopeptide Enrichment Using TiO₂ Coated Magnetic Beads: Phosphoproteomic Analysis of *Drosophila* Kc167 Cell Lysates;** Lei Cheng¹; Sven Andrecht²; Joerg von Hagen²; Clause Juel Jensen³; Morten Frodin³; Ole N. Jensen¹; ¹Univ. of Southern Denmark, Odense, Denmark; ²Merck KGaA, Darmstadt, Germany; ³Biotech Research & Innovation Center, Copenhagen, Denmark
- WP 394 **Development of PolyMAC-Ti, A Novel Soluble Nanopolymer-Based Phosphopeptide Enrichment Method;** Anton Iliuk; Bethany Alicie; Vicky Martin; Robert Geahlen; Weiguo Andy Tao; Purdue University, West Lafayette, IN
- WP 395 **High Performance Phosphoproteomics Using Phase Transfer Surfactant;** Takeshi Masuda¹; Mio Iwasaki^{1,2}; Yasuyuki Igarashi¹; Masaru Tomita^{1,2}; Yasushi Ishihama^{1,3}; ¹Institute for Advanced Biosciences Keio University, Tsuruoka, Japan; ²Keio University, Yamagata, Japan; ³PRESTO, Japan Science and Technology Agency, Tokyo, Japan
- WP 396 **A High-Throughput Analysis of Phosphopeptides Using a Biphasic Pre-Column;** Tabiwang N. Arrey; Thorsten Wolfgang Jaskolla; Dominic Baemlisberger; Björn Meyer; Michael Karas; University of Frankfurt, Frankfurt Am Main, Germany
- WP 397 **Enrichment of Phosphopeptides Using Polymer-Titanium(IV) Hybrid Materials on MALDI Plates;** Wei-Han Wang; Yu-Jing Tan; Merlin L. Bruening; Michigan State University, East Lansing, MI
- WP 398 **Direct on-TiO₂ Isotopic Labeling of Phosphopeptides by iTRAQ – Qualitative and Quantitative Validation of TiO₂ Phosphopeptide Enrichment Parameters;** Martin R. Larsen; Univ. Southern Denmark, Odense, Denmark
- WP 399 **A Screening Method for the Detection of Phosphorylated Peptides in High-Resolution Mass Spectra;** Dirk Valkenborg^{1,2}; Raf Van De Plas²; Rita Derua²; Etienne Waelkens²; Tomasz Burzykowski¹; ¹UHasselt, Hasselt, Belgium; ²K.U.Leuven, Leuven, Belgium
- WP 400 **High Speed MALDI TOF/TOF Analysis – Its Advantages for Identification of Digested Proteins and Screening for Phosphorylated Peptides in LC-MS/MS;** Dietmar Waidelich; Christof E. Lenz; Dietrich Merkel; Matthias Glueckmann; Applied Biosystems, Darmstadt, Germany
- WP 401 **Lys-N and Trypsin Cover Complementary Parts of the Phosphoproteome in a Refined SCX-Based Phosphoproteomics Approach;** Shabaz Mohammed; Sharon Gauci; Andreas Helbig; Nadia Taouatas; A.f. Maarten Altelaar; Albert J.r. Heck; Utrecht University, Utrecht, Netherlands
- WP 402 **Improved Sample Preparation for Phosphoproteome Analysis of Rat Brain Tissue;** Erol E. Gulcicek; Kathryn L Stone; Can Bruce; Raimund I Herzog; Robert S Sherwin; Yale University, New Haven, CT
- WP 403 **Application of Acid Hydrolysis on Bovine Beta-Casein to Investigate the Integral Phosphorylation;** Jinhee Kim; Seongjae Shin; Hyo-jik Yang; Jeongkwon Kim; Chungnam National University, Daejeon, South Korea
- WP 404 **The Determination of Flavin Binding to Rnf Family of Membrane Proteins by MALDI-MS/MS;** Dmitri Zagorevski; Blanca Barquera; Rensselaer Polytechnic Institute, Troy, NY
- WP 405 **Characterization of the Auto-Phosphorylation Mechanisms of an Oncogenic Fusion Protein NPM-ALK Using Tandem Affinity Purification-Mass Spectrometry;** Peng Wang; Fang Wu; Leah C Young; Raymond Lai; Liang Li; University of Alberta, Edmonton, Canada
- WP 406 **Dun1 FHA Domain-Dependent Dun1 Phosphorylation by Mass Spectrometry;** Eric S.-W. Chen^{1,2}; Hyun Lee¹; Ming-Daw Tsai^{1,2}; ¹Genomic Research Center, Academia Sinica, Taipei, Taiwan; ²National Taiwan University, Taipei, Taiwan
- WP 407 **Regulation of Protein Phosphorylation at the Postsynaptic Density: Global Analysis Targeting Specific Kinase and Phosphatase Activities;** Howard Jaffe²; Ayse Dosemeci¹; ¹NINDS/NIH, Bethesda, MD; ²NIH, NINDS, Gaithersburg, MD
- WP 408 **LC-MS^E Phosphopeptide Mapping of RhoA and RhoC following *in vitro* Phosphorylation by PKCε;** Gregory S. Cavey¹; Caryn L. Lehner¹; Joan C. Krilich²; Quintin Pan³; ¹Van Andel Research Institute, Grand Rapids, MI; ²Nanosphere Inc., Northbrook, IL; ³Ohio

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- WP 409 **Identification of Protein Phosphorylation Sites of Human APPL1 Using MS, MS/MS, and IM-MS;** Randi L. Gant -Branum; John A. Mclean; *Vanderbilt University, Nashville, TN*
- WP 410 **Quantitative Cancer Stem Cell Phosphoprotein Profiling by Use of Tandem Mass Tags and LC-HCD-MS/MS in an LTQ-Orbitrap;** Carol L. Nilsson⁶; Arugadoss Devakumar¹; Roslyn Dillon¹; John C. Rogers²; Bryan Krastins³; Mary Lopez³; Michael Rosenblatt³; Barbara Kaboord²; Charles A. Conrad⁴; ¹Pfizer Global R & D, San Diego, CA; ²ThermoFisher Scientific, Rockford, IL; ³Thermo Scientific, Rockford, IL; ⁴University of Texas, M.D.A.C.C., Houston, TX; ⁵Thermo Fisher Scientific, BRIMS Center, Cambridge, MA; ⁶Pfizer Inc., San Diego, CA
- WP 411 **Temporal Analysis of Nocodazole-Induced Phosphorylation Using LTQ Orbitrap;** Kohji Nagano; Takashi Shinkawa; Hironori Mutoh; Osamu Kondoh; Sayuki Morimoto; Noriyuki Inomata; Motooki Ashihara; Nobuya Ishii; Yuko Aoki; Masayuki Haramura; *Chugai Pharmaceutical, Kamakura, Japan*
- WP 412 **Phosphorylation of Arginine Guanidyl Groups as Posttranslational Protein Modification;** Andreas Schmidt²; Goran Mitulovic³; Jakob Fuhrmann¹; Tim Clausen¹; Karl Mechtler^{1,3}; ¹IMP Research Institute of Mo, Vienna, Austria; ²CD Laboratory / Vienna, Vienna, Austria; ³IMBA Inst. of Mol. Biotech., Vienna, Austria
- WP 413 **Mass Spectrometry Characterization of hCenexin1 Phosphorylation Vital to Polo-like Kinase 1 (Plk1) Interaction for Mitotic Functions;** Li-Rong Yu¹; Nak-Kyun Soung²; Jung-Eun Park²; Kyung H. Lee²; Jung-Min Lee³; Jeong K. Bang⁴; Timothy D. Veenstra⁵; Kunsoo Rhee³; Kyung S. Lee²; ¹National Center for Toxicological Research/FDA, Jefferson, AR; ²National Cancer Institute/NIH, Bethesda, MD; ³Seoul National University, Seoul, South Korea; ⁴Korea Basic Science Institute, Busan, South Korea; ⁵SAIC-Frederick, Inc., Frederick, MD
- WP 414 **Label-Free Quantitation by LC-MS of the Global and Phosphoenriched Heart Tissue Proteome Reveals Novel Nitrite-Mediated Pathways to Cardioprotection;** David H. Perlman; Giuseppe Infusini; Selena Bauer; Bernadette O. Fernandez; Vivek N. Bhatia; Mark E. McComb; Martin Feelisch; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*
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- WP 415 **AMOM: Investigational New Analytical Marker of Oxidation for Monoclonal Antibodies using RP-LC/MS, Peptide Maps and SPR;** John C. Le; Justin T. Paroski; Bernice Yeung; Byeong S. Chang; *Symyx Technologies Inc., Camarillo, CA*
- WP 416 **Thermodynamic Measurements of Enzyme Stabilities Using H/D exchange and MALDI-TOF MS;** Cheng-Ying Lin; Yen-Peng Ho; *National Dong Hwa University, Hualien, Taiwan*
- WP 417 **Ligand Binding to Cytochrome P450 46A1 as Assessed by Hydrogen – Deuterium Exchange and Mass Spectrometry;** Wei-Li Liao¹; Nathan Dodder²; Natalia Mast³; Irina A. Pikuleva³; Illarion V. Turko¹; ¹Center for Advanced Research in Biotechnology, Rockville, MD; ²NIST, Gaithersburg, MD; ³Case Western Reserve University, Cleveland, OH
- WP 418 **Allosteric Networks and Regulation of Protein Kinase A: Amide H/D Exchange Mass Spectrometry Reveals Parallels between cAMP Binding and Phosphorylation;** Ganesh S. Anand¹; Tanushree Bishnoi¹; Susan Taylor²; Elizabeth Komives²; ¹National University of Singapore, Singapore, Singapore; ²University of California, La Jolla, CA
- WP 419 **70S Ribosomal-Protein Dynamics in Translocation Revealed by H/D Exchange and Mass Spectrometry;** Tatsuya Yamamoto¹; Yoshihiro Shimizu²; Takuya Ueda²; Yoshitsugu Shiro¹; ¹RIKEN, Sayo-gun, Japan; ²Grad. Sch. Frontier Sci., Univ. Tokyo, Kashiwa, Japan
- WP 420 **Two New Tools for Applying Chromatographic Retention Data to the Mass-Identification of HDX Peptides during HD-Exchange Experiments by NanoLC-MALDI;** Enrique Cauich; Paul Gershon; *UC-Irvine, Irvine, CA*
- WP 421 **Combined Ion Mobility and Rapid Gas-Phase Deuterium Labeling in a Synapt Mass Spectrometer for Enhanced Detection of Protein Conformations;** Kasper D. Rand¹; James P. Murphy III²; Keith Faden²; John R. Engen¹; ¹Northeastern University, Boston, MA; ²Waters Corporation, Milford, MA
- WP 422 **Generation of Native Protein Ions and H/D Exchange in Liquid Sample Desorption Electrospray Ionization Mass Spectrometry (DESI-MS);** Zhixin Miao; Hao Chen; *Ohio University, Athens, OH*
- WP 423 **New Developments to HD Desktop Software for the Data Analysis of Hydrogen Exchange Mass Spectra;** Bruce Pascal; Michael Chalmers; Jun Zhang; Scott Busby; Patrick R. Griffin; *The Scripps Research Institute, Scripps Florida, Jupiter, FL*
- WP 424 **Characterization of Thermal Unfolding in Proteins Using Electrospray Ionization Time of Flight Mass Spectrometry and Top Down Fragmentation;** Douglas Rehder; Sabine Paterson; David Hambly; Jaby Jacob; Michael J. Treuheit; Bruce Kerwin; Himanshu Gadgil; *Amgen Inc., Seattle, WA*
- WP 425 **IR Photodissociation Spectra of Gaseous Protein Ions: Hydrogen Bonding of Side-Chain Protonated Amino Groups is Unusually Strong;** Xianglei Kong¹; Kathrin Breuker²; Fred W. McLafferty¹; ¹Cornell University, Ithaca, NY; ²University of Innsbruck, Innsbruck, Austria
- WP 426 **New ECD Kinetic Probes of the Unfolding and Folding of Protein Conformers after Electrospray;** Sergio Castro¹; Kathrin Breuker²; Fred W. McLafferty¹; ¹Cornell University, Ithaca, NY; ²University of Innsbruck, Innsbruck, Austria
- WP 427 **Fragmentation of Gas Phase Ions of Ubiquitin Produced from Different Solution Conformations in a 3D Ion Trap;** John Wright; *Varian Inc., Wood Dale, IL*
- WP 428 **Mass spectrometry-Based Studies of the Vancomycin Resistance Pathway in *Enterococcus faecalis*;** Charlotte A. Scarff; Andrew M. Quigley; Adrian J. Lloyd; David I. Roper; James H. Scrivens; *University of Warwick, Coventry, UK*
- WP 429 **Development of Mass Spectrometry-Based Experimental Strategies for Detection and Characterization of Proteins with Non-Native Disulfide Bonds;** Adriana Zeledon; Igor A. Kaltashov; *University of Massachusetts, Amherst, MA*
- WP 430 **Computational Methods for Incorporation of Structural Mass Spectrometry Data in Structure Determination;** Xiaojing Zheng¹; Robert M. Vernon²;

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- WP 431 **MS Cleavable Crosslinker for Protein Interactions;** Billy Clifford-Nunn; Eric Simon; Philip Andrews; University of Michigan, Ann Arbor, MI
- WP 432 **“MALDI-MS3” Analysis of CID-Cleavable Isotopically Coded Crosslinker TEABS;** Jamie Thomas; Evgeniy Petrotchenko; Christoph Borchers; UVic-GBC Proteomics Centre, Victoria, Canada
- WP 433 **Probing the Electrostatic Surface Topology of Proteins Using Combinatorial Collision-Induced Dissociative Chemical Crosslinking Reagents and Mass Spectrometry Analysis;** Fan Liu; Michael B. Goshe; NC State University, Raleigh, NC
- WP 434 **Structural Proteomics Revisited: A Top-Down Approach to Chemical Crosslinking and Protein Interactions;** Giuseppe Infusini; Weiwei Tong; David H. Perlman; Roger Theberge; Catherine E. Costello; Boston University School of Medicine, Boston, MA
- WP 435 **A Strategy for Efficient Identification of Chemically-Crosslinked Sites in Large Protein Complexes Using Label-Free LC-MS/MS Pattern Comparisons and Targeted MS/MS;** Donghai Li¹; Sandra L. Harper¹; Hsin-yao Tang¹; David W. Speicher^{1,2}; ¹The Wistar Institute, Philadelphia, PA; ²Wistar Institute, Philadelphia, PA
- WP 436 **Development of Polyproline Linked Bifunctional Crosslinkers as Molecular Rulers for the Structural Investigation of Protein Assemblies;** Timothy Garrett Jr.; Kevin B. Turner; Daniele Fabris; U. Maryland Baltimore County, Baltimore, MD
- WP 437 **Structure Determination of Proteins from the Endoplasmic Reticulum Using Chemical Cross-Linking, Mass Spectrometry and Bioinformatics;** Morten Rasmussen¹; Tina Nielsen¹; Gunnar Houen³; Juri Rappsilber²; Peter Hojrup¹; ¹BMB, University of Southern Denmark, Odense M, Denmark; ²Wellcome Trust Centre for Cell Biology, Edinburgh, UK; ³Statens Serum Institut, Copenhagen, Denmark
- WP 438 **Use of N-Terminal Modification with Isotopically Coded Reagents for Selective Identification of Inter-Peptide Crosslinks;** Jason Serpa; Evgeniy Petrotchenko; Christoph Borchers; UVic-GBC Proteomics Centre, Victoria, Canada
- WP 439 **Crosslinking Techniques for Structural Studies of Large, Multi-chain Coagulation-Related Proteins;** Susan T. Lord¹; Maria Warren Hines²; Evgeniy Petrotchenko³; Carol E. Parker²; ¹Department of Pathology & Lab. Medicine, UNC-CH, Chapel Hill, NC; ²UNC-Duke Proteomics Center, UNC-CH, Chapel Hill, NC; ³UVic-GBC Proteomics Centre, Victoria, BC
- WP 440 **Out-gel Digest Procedure for Protein Cross-Linking Applications;** Ashley Cabecinha; Evgeniy Petrotchenko; Christoph Borchers; UVic-GBC Proteomics Centre, Victoria, Canada
- WP 441 **Probability Based Shotgun Approach for Cross-Linking Sites Analysis by Mass Spectrometry;** Young Jin Lee; Iowa State University, Ames, IA
- WP 442 **Characterization of β 2m Dimer Formation using Covalent Labeling, Bottom-Up, and Top-Down Strategies;** Vanessa Leah Mendoza¹; Jonathan Wilson²; Desmond Kaplan²; Richard Vachet¹; ¹University of Massachusetts, Amherst, MA; ²Bruker Daltonics, Inc., Billerica, MA
- WP 443 **Structural Study of C3b-H Complex Using Gamma and Synchrotron Irradiation Coupled with Semi-Quantitative Mass Spectrometry;** Maxime Le Mignon^{1,2}; Florence Gonnet^{1,2}; Sebastien Brier^{1,2}; Delphine Pflieger^{1,2}; Bianca Sclavi³; Serge Pin^{4,5}; Quentin Raffy^{4,5}; Jean-Philippe Renault^{4,5}; Régis Daniel^{1,2}; ¹Université Evry-Val-d'Essonne, Evry, France; ²CNRS UMR 8587, LAMBE, Evry, France; ³CNRS UMR 8113, LBPA, Cachan, France; ⁴CNRS URA 331 LCF, Gif-sur-Yvette, France; ⁵CEA IRAMIS, Gif-sur-Yvette, France
- WP 444 **Probing the Structure of Proinsulin by MS-Based Footprinting;** Janna Kiselar; Nelson B. Phillips; Mark R. Chance; Michael A. Weiss; Case Western Reserve Univ., Cleveland, OH
- WP 445 **Computational Methods for Examining Covalently Labeled Biomolecules Using Structural Mass Spectrometry;** Parminder Kaur; Janna Kiselar; Mark Chance; Case Western Reserve University, Cleveland, OH
- WP 446 **Characterizing the ATP-Induced Structural Changes of the N-Terminal Domain of Pms1 by Oxidative Surface Mapping and Mass Spectrometry;** Allison N. Schorzman¹; Lalith Perera¹; Lars C. Pedersen¹; Jenny M. Cutalo²; Thomas A. Darden¹; Thomas A. Kunkel¹; Kenneth B. Tomer¹; ¹NIEHS, RTP, NC; ²FBI, Washington, D.C., DC
- WP 447 **Autoantigen Structural Studies: Photolytic Oxidation and Chemical Modification Combined with Mass Spectrometry;** Jinglan Wang; James G. Smedley III; Piotr J. Bilski; Jeffrey F. Kuhn; Kenneth B. Tomer; Leesa Deterding; NIEHS, Research Triangle Park, NC
- WP 448 **Laser-Induced Oxidative Labeling of Proteins for Probing Folding Kinetics and Mechanisms;** Bradley B. Stocks; Lars Konermann; Univ. of Western Ontario, London, Canada
- WP 449 **Structural Characterization of an Integral Membrane Protein by Oxidative Methionine Labeling and Mass Spectrometry;** Yan Pan; Uni. of Western Ontario, London, Canada
- WP 450 **High Sensitivity Characterization of Conformational Differences in Pharmaceutical Proteins by Rapid Hydroxyl Radical Footprinting;** Caroline Watson¹; Sergio G. Tisminetzky²; Marshall W. Bern³; Joshua S. Sharp¹; ¹Complex Carbohydrate Research Center/UGA, Athens, GA; ²Biotechnology Development Group, ICGB, Trieste, Italy; ³Palo Alto Research Center, Palo Alto, CA
- WP 451 **MS-based Carboxyl Group Protein Footprinting for Probing the Orientation of FMO Protein in Photosynthetic Bacterial Membranes;** Hao Zhang; Jianzhong Wen; Robert E. Blankenship; Michael L. Gross; Washington University, Saint Louis, MO
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- WP 452 **Investigation of Protein-Protein Complex Noncovalent Interactions by Quadrupole, Ion Mobility Separation Time-of-Flight Mass Spectrometry;** Sheng Zhang¹; Abiola Pollard¹; Michael Daly²; Brian Crane¹; ¹Cornell University, Ithaca, NY; ²Waters Corp, Oakland, CA
- WP 453 **Determining Stoichiometry of Noncovalent Protein Complexes using LC-MS/MS Label-Free Protein Quantification;** Shirley H. Lomeli; Pinmanee Boonthung; Joseph A. Loo; UCLA, Los Angeles, CA
- WP 454 **Towards the Elucidation of the Protein Complexes Involved in Prokaryotic Origin Independent DNA**

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- WP 455 **Replication Restart – An ESI-MS Study;** Lindsey Easton; Jingshu Guo; Timothy Mueser; Wendell P. Griffith; *University of Toledo, Toledo, OH*
- WP 456 **Antibody / Antigen Complexes: Characterization of Immune Complexes Using Noncovalent Mass Spectrometry;** Cédric Atmanene¹; Elsa Wagner-Rousset²; Nathalie Corvaia²; Alain Van Dorsselaer¹; Alain Beck²; Sarah Sanglier-Cianferani¹; ¹CNRS - IPHC - University of Strasbourg, Strasbourg, France; ²Centre d'Immunologie Pierre Fabre, Saint-Julien-en-Genevois, France
- WP 457 **Optimization of Hydroxyl Radical Surface Mapping Method Combined with Molecular Dynamics Simulations for Characterizing Macromolecular Interactions;** Olga Charvatova¹; Daniel Nesbitt¹; Marshall W. Bern²; Joshua S. Sharp¹; Ron Orlando¹; Robert J. Woods¹; ¹University of Georgia, Athens, GA; ²Palo Alto Research Center, Palo Alto, CA
- WP 458 **Protein Aggregates: Fast Semi-Quantitation Analysis by High-Mass MALDI ToF Analysis;** Alexis Nazabal; Marc Dodeller; Nathalie Riesen; Benoit Plet; Ryan Wenzel; *CovalX AG, Zürich, Switzerland*
- WP 459 **CLIP: A Crosslinker for Enrichment and Confident Identification of Protein Crosslinking Sites by Mass Spectrometry;** Saiful M. Chowdhury¹; Xiuxia Du²; Nikola Tolic¹; Ashoka D. Polpitiya¹; Ronald J. Moore¹; John R. Cort^{1,3}; Uljana M. Mayer¹; Richard D. Smith¹; Joshua N. Adkins¹; ¹Pacific Northwest National Laboratory, Richland, WA; ²University of North Carolina, Charlotte, NC; ³Washington State University, Tri-cities, Richland, WA
- WP 460 **Technology Development for Studying Transient Protein-Protein Interactions on Chromosomes: Identification of a Transient Acetyltransferase Interactome;** Samuel G. Mackintosh¹; Sherri K. Smart¹; Sean D. Taverna²; Ricky D. Edmondson¹; Alan J. Tackett¹; ¹University of Arkansas for Medical Sciences, Little Rock, AR; ²Johns Hopkins Medical School, Baltimore, MD
- WP 461 **Structural Characterization of Macromolecular Protein Complexes Using Chemical Cross-Linking and Mass Spectrometry;** Pragya Singh; Richard A. Pfuetzner; Scott A. Shaffer; Alexandre Panchaud; Eri Nakatani; Carlos E. Catalano; Samuel I. Miller; David R. Goodlett; *University of Washington, Seattle, WA*
- WP 462 **Defining Topological Features of Membrane Proteins by Electrospray Ionization Mass Spectrometry;** Lynsey N. Jones; Stephen A. Baldwin; Peter J. F. Henderson; Alison E. Ashcroft; *Astbury Centre for Structural Molecular Biology, University of Leeds, Leeds, UK*
- WP 463 **Photo-Crosslinking and Complementary Use of ESI and MALDI Mass Spectrometry to Map Interaction Sites between Transcriptional Activators and Mediator 15;** Bo Wang; Chinmay Majmudar; Anna Mapp; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*
- WP 464 **Characterization of Protein Complexes from Human Pancreatic Cancer Cell Using a Combination of Native-PAGE and Mass Spectrometry;** Xinli Wang; Guoqiang Chen; Zhiyun Zhao; Zhili Li; *Institute of Basic Medical Sciences, CAMS & PUMC, Beijing, China*
- CARBOHYDRATE / OLIGOSACCHARIDES, 465 - 491**
- WP 465 **A Comprehensive Method for Separating Neutral, Sialylated, and Sulfated N-linked Glycans in Their Native and Permethylated Forms;** Sergei Snovidia; Ed Bodnar; Helene Perreault; *University of Manitoba, Winnipeg, Canada*
- WP 466 **Profiling and Quantitation of Recombinant Monoclonal Antibody Glycosylation by Nano-LC/ESI-MS with the On-Chip Deglycosylation: Comparison to MALDI-TOF MS and CE-LIF;** Tomasz K. Baginski¹; Maggie Bynum²; Rodney Keck¹; ¹Genentech, Inc., South San Francisco, CA; ²Agilent Technologies, Santa Clara, CA
- WP 467 **An LC/MS Platform for Aminated Oligosaccharide Analysis in Both Positive and Negative Modes: towards More Complete Structural Assignment;** Ewa Jankowska; John F. Cipollo; *Food and Drug Administration CBER, Bethesda, MD*
- WP 468 **Characterization of Complex N-Glycans Using High pH Anion Exchange and in-line Mass Spectrometry (HPAEC/MS);** Louise Chen; Bhavana Shah; Gary Rogers; *Amgen, Thousand Oaks, CA*
- WP 469 **N-glycans Profiling Using Capillary Liquid Chromatography and High Mass Accuracy Electrospray Mass Spectrometry: Application to the Characterization of Therapeutic Glycoproteins;** Valegh Faïd; Magali Andre; Nicolas Bihoreau; Guillaume Chevreux; *LFB, Courtaboeuf, France*
- WP 470 **An Integrated Microfluidic LC/MS Chip Workflow for Rapid On-line Deglycosylation and Characterization of N-glycans from IgG Antibodies;** Maggie A. Bynum¹; Hongfeng Yin¹; Katie Felts²; Yvonne Lee²; Craig Monell²; Kevin Killeen¹; ¹Agilent Laboratories, Santa Clara, CA; ²Agilent Technologies, La Jolla, CA
- WP 471 **Profiling and Characterization of N- and O-Linked Glycans Released from Glycoproteins Using RP-HPLC with Charged Aerosol Detection and Mass Spectrometry;** Andrew Hanneman; Jason Rouse; *Wyeth BioPharma, Andover, MA*
- WP 472 **High Resolution CE-MS Separation of APTS-Labeled Glycans;** Tomas Rejtar; Dipak Thakur; Zhenke Liu; Andras Guttman; Barry L. Karger; *Northeastern University, Boston, MA*
- WP 473 **Structure Library for Oligosaccharides Built on Retention Times and Accurate Masses;** Shuai Wu¹; Nannan Tao¹; J. B. German¹; Rudi Grimm²; Carlito B. Lebrilla¹; ¹UC Davis, Davis, CA; ²Agilent Technologies, Palo Alto, California
- WP 474 **Combining Fully Automated Chip-Nanoelectrospray Ion Trap Mass Spectrometry and GanglioSoft 1.2 Computer Software for Identification of Human Hemangioma Gangliosides;** Catalin C. Schiopu¹; Alina F. Serb²; Eugen Sisu²; Zeljka Vukelic³; Alina D. Zamfir⁴; ¹National Institute for R&D in Electrochemistry, Timisoara, Romania; ²University of Medicine and Pharmacy, Timisoara, Romania; ³University of Zagreb, Zagreb, Croatia; ⁴University Aurel Vlaicu Arad, Arad, Romania

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- WP 475 **Software Utilities for Automated Glycomics**; Sergey Y. Vakhrushev; Denis Dadimov; Jasna Peter-Katalinic; *Institute of Medical Phys, Muenster, Germany*
- WP 476 **Can a Peptide Map Replace The Traditional Glycan Map for N-Glycan Analysis?** Bhavana Shah; Xinzhaio Grace Jiang; Louise Chen; Zhongqi Zhang; *Amgen, Inc., Thousand Oaks, CA*
- WP 477 **Multiple Reaction Monitoring Liquid Chromatography Mass Spectrometry for Monosaccharide Compositional Analysis of Glycoproteins**; Loubna A. Hammad; Marwa Saleh; Milos V. Novotny; Yehia Mechref; *Indiana University Biochem Ctr, Bloomington, IN*
- WP 478 **Optimization of Three Atmospheric Pressure Mass Spectrometry (AP-MS) Techniques to Observe Oligosaccharide Degradation Products in Naturally and Artificially Aged Paper**; Catherine H. Stephens^{1,2}; Bindesh Shrestha³; Paul M. Whitmore^{1,2}; Mark E. Bier²; Akos Vertes³; ¹Art Conservation Research Center, Pittsburgh, PA; ²Carnegie Mellon University, Pittsburgh, PA; ³George Washington University, Washington, DC
- WP 479 **Differentiation of Lithium Cation-Attached Mono- and Disaccharide Isomers by Wavelength-Dependent CO₂ Laser Photofragmentation and FTICR Mass Spectrometry**; John R. Eyler; Sarah E. Stefan; *University of Florida, Gainesville, FL*
- WP 480 **Structural Characterization of 1-octyl-β-D-Glucopyranoside Using Zinc Cationization. An Electrospray Ionization and Tandem Mass Spectrometry Study**; Khaled Edbey¹; Grainne Moran²; Gary Willett²; ¹University of Garyounis, Benghazi, Libya; ²The University of New South Wales, Sydney, NSW
- WP 481 **Changes in Modifications of Cell Wall Oligosaccharides from Lignocellulosic Biomass During AFEX Pretreatment Using LC/TOFMS and Multiplexed CID**; Ramin Vismeh; Shishir P Chundawat; Venkatesh Balan; Bruce E Dale; A. Daniel Jones; *Michigan State University, East Lansing, MI*
- WP 482 **Infrared Multiple Photon Dissociation (IRMPD) Spectra of Rubidium Cation-Tagged D-Glucuronic and L-Iduronic Acids**; Emilio Cagmat; Jan Szczepanski; Nicolas Polfer; David H. Powell; John R. Eyler; *Department of Chemistry, University of Florida, Gainesville, FL*
- WP 483 **Compositional and Structural Analysis of Gangliosides in Human Cerebrospinal Fluid by Chip-Based Nanoelectrospray Ionization Tandem Mass Spectrometry**; Alina F. Serb¹; Catalin C. Schiopu²; Dragana Marincic³; Zeljka Vukelic³; Alina D. Zamfir⁴; ¹University of Medicine and Pharmacy, Timisoara, Romania; ²National Institute for R&D in Electrochemistry, Timisoara, Romania; ³University of Zagreb, Zagreb, Croatia; ⁴Aurel Vlaicu University of Arad, Arad, Romania
- WP 484 **Characterization of Protein Glycosylation Intermediates by LC-MS/MS on Porous Graphitic Carbon: Discovery of C45 and C60 Polyisoprenyl-Oligosaccharide Lipid Carriers**; Jacek Stupak¹; Christopher Reid¹; Christine M. Szymanski²; Jianjun Li¹; ¹National Research Council, Ottawa, ON; ²AICCS, University of Alberta, Edmonton, AB
- WP 485 **MALDI Tandem MS Analysis of Cellulose and Related Biomolecules: Potential for MS Imaging of Cellulosic Tissues**; Kyle A. Lunsford; Gary F. Peter; Richard A. Yost; *University of Florida, Gainesville, FL*
- WP 486 **Analysis of Mycothiol and Mycothione Levels from Wild-Type and *mtr* Mutant Strains from *Mycobacterium smegmatis***; Cynthia M Holsclaw¹; Wilson B Muse³; Kate Carroll³; Julie A. Leary^{1,2}; ¹Section of MCB, University of California, Davis, CA; ²Department of Chemistry, University of California, Davis, CA; ³Life Sciences Institute, University of Michigan, Ann Arbor, MI
- WP 487 **Analysis of Brain Chondroitin/Dermatan Sulfate Glycosaminoglycans by Fully Automated Chip-Based Nanoelectrospray Multistage Mass Spectrometry**; Corina Flangea²; Eugen Sisu²; Daniela Seidler³; Alina D. Zamfir¹; ¹University Aurel Vlaicu Arad, Arad, Romania; ²University of Medicine and Pharmacy, Timisoara, Romania; ³University of Muenster, Muenster, Germany
- WP 488 **Strategies toward Characterizing Sulfated Glycans in Recombinant Proteins**; John J. Thomas¹; Paul Salinas¹; Gregory O Staples²; Hicham Naimy²; Joseph Zaia²; Philip J. Savickas¹; ¹Shire HGT, Cambridge, MA; ²Boston University School of Medicine, Boston, MA
- WP 489 **The Occurrence of Rare, Unsubstituted Glucosamine-Containing Disaccharides in Heparan Sulfate from Bovine and Rat Tissues: an SEC LC/MS Study**; Xiaofeng Shi; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- WP 490 **On-Line Tandem Mass Spectrometry for Characterization of Protein Binding Heparan Sulfate Octasaccharides**; Hicham Naimy; Nancy Leymarie; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- WP 491 **Improved HILIC LC/MS Analysis of Heparinoids Using a Chip with Post-column Make-Up Flow**; Gregory O. Staples¹; Hicham Naimy¹; Hongfeng Yin²; Karsten Kraiczek³; Kevin Killeen²; Catherine E. Costello¹; Joseph Zaia¹; ¹Boston University School of Medicine, Boston, MA; ²Agilent Laboratories, Santa Clara, CA; ³Agilent Technologies, Waldbronn, Germany

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- WP 492 **Biological Activities and Compositions of Protein Extracted from *Kaempferia Parviflora* Wall. Ex.** Baker; Polkit Sangvanich; *Chuklalongkorn University, Bangkok, Thailand*
- WP 493 **Characterization of the Disulfide Connectivity and N-linked Glycosylation of KLH using a LTQ with CID and ETD**; Justin B. Sperry; Halyna E. Narepekha; Qin Zou; James A. Carroll; *Pfizer, Saint Louis, MO*
- WP 494 **A Novel Approach for Identification and Quantitation of Protein Glycosylation Pattern by Precursor Ion Scan and H-SRM on QQQ Instrument**; Andreas F.R. Hühmer¹; Reiko Kiyonami¹; Shiao-lin Wu²; Barry L. Karger²; Vlad Zabrouskov¹; William S. Hancock²; ¹ThermoFisher Scientific, San Jose, CA; ²Barnett Institute, Northeastern University, Boston, MA
- WP 495 **Electron Capture Dissociation of Sialated Glycopeptides**; Prasanna Ramachandran; Sheng Yin; Rachel R Ogorzalek Loo; Joseph A. Loo; *University of California, Los Angeles, CA*
- WP 496 **Parallel Structural Characterization of Glycopeptides and Glycoprotein Quantification by Electrospray Quadrupole Ion-Mobility Time-of-Flight Mass Spectrometry with Ultra Performance Liquid Chromatography**; Hui Wei¹; Wen Ding²; John

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- WP 497 Kelly²; ¹Waters Corporation, Milford, MA; ²National Research Council of Canada, Ottawa, Ontario, Canada
Combined Analysis Of Protein Glycosylation and Label-Free-Glycoprotein-Bacteria Interactions Using MALDI-FTICR MS and Scanning Optical Microscope Based on OI-RD; Mariana Barboza; Yiyan Fei; David A. Mills; Bruce J. German; XiangDong Zhu; Carlito Lebrilla; *University of California., Davis, CA*
- WP 498 **Analysis of Site-Specific Glycosylation Profile of Glycoproteins by LC-ECD-MS/MS in a Radio Frequency Linear Ion Trap;** Takeshi Sakamoto; Naomi Manri; Hiroyuki Satake; Akihito Kaneko; *Central Res. Lab., Hitachi, Ltd., Tokyo, Japan*
- WP 499 **Site-Specific Glycoprofiling of N-Linked Glycopeptides Using MALDI-TOF MS;** Morten Thaysen-Andersen; Simon Mysling; Peter Hojrup; *BMB, University of Southern Denmark, Odense M, Denmark*
- WP 500 **Application of Source CID MS/MS Scan with Combination of CID and PQD Fragmentations to Rapidly Identify and Characterize Glycoproteins;** Yite Chou; *Amgen, Thousand Oaks, CA*
- WP 501 **A Glycoproteomics Approach for Profiling of Pharmaceutical Compounds Using Quantitative Glycopeptide Enrichment and Online LC (HILIC/RP) – Mass Spectrometry;** Jessica Wohlgemuth; Thomas Eichhorn; Robertus Hendriks; Sven Andrecht; *Merck KGaA, Darmstadt, Germany*
- WP 502 **Comprehensive Characterization of Haptoglobin Glycosylation Using a PLOT LC column with a Thermo LTQ-ETD-MS;** Dongdong Wang; Marina Hincapie; Shiao-Lin Wu; Barry L. Karger; *Northeastern University, Boston, MA*
- WP 503 **Assigning the Glycosylation Sites of Glycoproteins Using Endo-M in Conjunction with LC/MSMS;** Ahmed Hussein^{1,2}; Zaneer, M. Segu^{1,3}; Milos, V. Novotny^{1,2}; Yehia Mechref^{1,2}; ¹Dept of Chemistry, *Indiana University, Bloomington, IN*; ²National Center for glycomics and glycoproteomics, *Bloomington, IN*; ³METACyt Biochemical Analysis Center, *Bloomington, IN*
- WP 504 **Identification and Quantitation of Sialylated glycopeptides as Cancer Biomarkers Using TiO2 Chromatography Combined with iTRAQ, O18-Labeling and MRM;** Sara Eun Lendal^{1,2}; Søren Cold³; Martin R. Larsen²; ¹Protein Research Group, *Odense, Denmark*; ²Univ. Southern Denmark, *Odense, Denmark*; ³Odense University Hospital, *Odense, Denmark*
- WP 505 **Identification and Quantification of Glycoproteins Using Ion-Pairing Normal-Phase Liquid Chromatography and Mass Spectrometry;** Wen Ding¹; Harald Nothaft²; Christine Szymanski²; John F. Kelly¹; ¹National Research Council of Canada, *Ottawa, ON*; ²University of Alberta, *Edmonton, AB*
- WP 506 **Method Optimization for the Determination of Protein Site of N-Glycosylation: Case Study for SynCAM 1;** Edward Voss¹; Thomas Biederer¹; Terence Wu¹; Michael L. Easterling²; Mary LoPresti¹; Kenneth R. Williams¹; Tukiet T. Lam¹; ¹Yale University, *New Haven, CT*; ²Bruker Daltonic, *Billerica, MA*
- WP 507 **Pancreatic Cancer Serum Detection Using A Lectin/Glyco-Antibody Array Method;** Chen Li¹; Eugene Zolotarevsky¹; Michelle A. Anderson¹; Dean E. Brenner¹; Diane M. Simeone¹; David M. Lubman¹; Fan Xiang²; ¹University of Michigan, *Ann Arbor, MI*; ²Shimadzu Biotech, *Pleasanton, CA*
- WP 508 **A Novel Enrichment Method for Analysis of Sulfated Glycopeptides with MALDI TOF MS;** Masaaki Toyoda; Hisashi Narimatsu; Akihiko Kameyama; *Research Center for Medical Glycoscience, AIST, Tsukuba, Ibaraki, Japan*
- WP 509 **Glycoprotein Capturing through Functionalized Magnetic Nanoparticles;** Hyo-jik Yang¹; Seongjae Shin¹; Eun Hye Park¹; Jinhee Kim¹; Yangsun Kim²; Jeongkwon Kim¹; ¹Chungnam National University, *Daejeon, South Korea*; ²Hudson Surface Technology, *Newark, NJ*
- WP 510 **Highly Sensitive MALDI-MSⁿ for Identification of Glycopeptides by a Simple Pyrene-Derivatization Method;** Junko Amano; Takashi Nishikaze; Fumio Tougasaki; *The Noguchi Institute, Itabashi, Japan*
- WP 511 **Enrichment and Identification of Glycoproteins and Glycan Using Nano-Scale Chelating Con A Monolithic Capillary;** Shun Feng¹; Na Yang¹; Subramaniam Pennathur¹; Steve Goodison²; David M. Lubman¹; Fan Xiang³; ¹University of Michigan, *Ann Arbor, MI*; ²University of Florida, *Jacksonville, FL*; ³Shimadzu Biotech, *Pleasanton, CA*
- WP 512 **A Comparison Study of Glycopeptides Enrichment of Boronic Acid Derived Magnetic Beads and Bare Silica-Coated Magnetic Nanoparticles;** Ming-yi Ho; Chung-lin Liao; *Academia Sinica, Taipei, Taiwan*

PLASMA PROTEOMICS, 513 - 524

- WP 513 **Method for Purification and Identification of Protein Biomarker from Human Serum Using TOF-TOF Instrument;** Vanitha Thulasiraman¹; Matthew Hammond¹; Amanda Bulman¹; Steve Roth¹; Mariana Rusa¹; Enrique Dalmaso¹; Diane McCarthy²; Fiona Plows³; ¹Bio-Rad Laboratories, *San Jose, CA*; ²Bio-Rad, *Malvern, PA*; ³Bio-Rad Laboratories, Inc., *Hercules, CA*
- WP 514 **Quantitative Analysis of Chaotropic & Solvent Effects on the Trypsin Digestion Efficiency of Human Plasma;** Michael A. Kuzyk¹; Darryl Hardie¹; Juncong Yang¹; Derek Smith¹; Angela M. Jackson¹; N. Leigh Anderson²; Jennifer Proc³; Christoph H. Borchers¹; ¹UVic-Genome BC Proteomics Centre, *Victoria, Canada*; ²Plasma Proteome Institute, *Washington, D.C.*
- WP 515 **Analysis of Native Proteins by NanoLC-FT-ICR-MS : Application to the Identification of Apolipoprotein A-I Modifications Induced by Oxidative Stress;** Alexia Ortiz¹; Gérald Luc²; Caroline Tokarski¹; Christian Rolando¹; ¹Univ. des Science/Tech de Lille, *Villeneuve d'Ascq, France*; ²Université du Droit et de la Santé, *Lille, France*
- WP 516 **Changes in the Maternal Serum Proteome between the 1st and 3rd Trimesters of Uncomplicated Pregnancy in Nepal;** Peter Scholl^{1,3}; Marjan Gucek²; Roberto Diez²; Ingo Ruczinski³; Alissa Rennie³; Chris Nathasingh³; Robert N. Cole²; James Yager³; John D. Groopman³; Kerry Schulze³; Parul Christian³; Keith West³; ¹US FDA, *College Park, MD*; ²Johns Hopkins University, *School of Medicine, Baltimore, MD*; ³JHU, *Bloomberg School of Public Health, Baltimore, MD*
- WP 517 **A Recovery Strategy of Co-Depleted Proteins in Affinity-Based Separation Workflows for Plasma and serum;** Yanbao Yu^{1,2}; Harsha P. Gunawardena^{1,2}; Xian Chen^{1,2}; ¹University of North Carolina, *Chapel Hill, NC*; ²UNC-Duke Proteomics Centre, *Chapel Hill, NC*
- WP 518 **Proteomic Analysis of Human Plasma Proteins by IEF-LC-MS/MS Analysis following Depletion of High-Abundance Proteins;** Chengjian Tu; Misti Yates; Kristin Cheek; Robbert Slebos; David Tabb; Daniel C.

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- Liebler; *Department of Biochemistry, Vanderbilt University, Nashville, TN*
- WP 519 **Enhanced Analytical Resolution Due to Efficient Depletion of Albumin and IgG from Human Plasma Using New Prepacked Columns;** Inger Salomonsson; Susanna Lindman; Ulf Hellberg; Staffan Lindqvist; Gunnar Glad; Lena Jonsson; Ann Bergh; *GE Healthcare, Uppsala, Sweden*
- WP 520 **FT-ICR MS Profiling of Small Molecule Derived from Plasma Obtained from Gaucher Disease Patients;** TuKiet T. Lam¹; Mei Yang¹; Michael Easterling²; Edward Voss¹; Pramod K. Mistry¹; Kenneth R. Williams¹; ¹*Yale University, New Haven, CT*; ²*Bruker Daltonics, Inc., Billerica, MA*
- WP 521 **A High Quality Human Plasma Proteome Available in the PeptideAtlas;** Terry Farrah¹; Eric Deutsch¹; David Shteynberg¹; David S Campbell¹; Henry H. Lam²; Zhi Sun¹; Gilbert Omenn^{1,3}; Ruedi Aebersold^{1,4}; ¹*Institute for Systems Biology, Seattle, WA*; ²*Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong*; ³*University of Michigan, Ann Arbor, MI*; ⁴*Swiss Federal Institute of Technology, Zurich, Switzerland*
- WP 522 **Development of Metrics for Assessment of Plasma Quality;** Lisa J Zimmerman¹; Julie A Coleman¹; Douglas P Hardin¹; Alexander Statnikov¹; Constantin Aliferis²; Daniel C. Liebler³; ¹*Vanderbilt University, Nashville, TN*; ²*New York University, New York, NY*; ³*Vanderbilt Univ. School of Medicine, Nashville, TN*
- WP 523 **LC-MS/MS Analysis of HDL Complexes Isolated by IgY Immuno-Capture;** Yunan Miao¹; Junji Watanabe²; George Katselis¹; Srinivasa T. Reddy²; Terry Lee¹; ¹*City of Hope, Duarte, CA*; ²*University of California, Los Angeles, Los Angeles, CA*
- WP 524 **Quantitative Study of Plasma Proteome Dynamics in Genetically Leptin Deficient Patients during Leptin Replacement Treatment;** Victor Andreev²; Ravi Dwivedi¹; Gilberto Paz-Filho²; Oleg V. Krokhnin¹; Ma-Li Wong²; John Wilkins¹; Julio Licinio²; ¹*University of Manitoba, Winnipeg, Canada*; ²*University of Miami, Miami, FL*
- PROTEOMICS: TISSUE, 525 - 560**
- WP 525 **iTRAQ Labeling for Tissue Proteomics of Gastric Cancer;** Arivusudar Marimuthu^{1,2}; Yashwanth Subbannayya²; Harsha H.C.^{1,2}; Santhosh Renuse²; Ghantasala S. Sameer Kumar²; Manoj K Kashyap^{1,2}; Vijayakumar M³; Veerendra Kumar K.V.³; Vijayalakshmi Deshmane³; Girija Ramaswamy³; Rekha V Kumar³; Raghothama Chaerkady^{1,2}; Pradip Kumar Acharya²; Akhilesh Pandey¹; ¹*Johns Hopkins University, Baltimore, MD*; ²*Institute of Bioinformatics, Bangalore, Karnataka*; ³*Kidwai Memorial Institute of Oncology, Bangalore, India*
- WP 526 **Discovering Novel Components of the Dystrophin-Associated Protein Complex Using Mass Spectrometry-Based Approaches;** Aaron Lorscheig; Yetrib Hathout; Eric Hoffman; *Children's Natl. Medical Center, Washington, DC*
- WP 527 **Quantitative Proteomics Analysis of Alcohol-Induced Cardiomyopathy Using Label Free LC-MS Approach;** Elizabeth Yohannes¹; Helen Anni²; Gregory E Gonye²; Sergei Ilchenko¹; Emanuel Rubin²; Mark R. Chance¹; ¹*Case Western Reserve University, Cleveland, OH*; ²*Thomas Jefferson University, Philadelphia, PA*
- WP 528 **2D DIGE Proteomics of Rat Mammary Gland Intact Proteins to Identify Basis of Anti-Cancer Activity by Chemopreventive Polyphenols;** Mark B. Cope^{1,2}; Landon Wilson¹; Richie Herring¹; Gloria Robinson¹; Xiangqin Cui^{1,2}; Stephen Barnes^{1,2}; Helen Kim^{1,2}; ¹*University of Alabama at Birmingham, Birmingham, AL*; ²*UAB Center for Nutrient-Gene Interaction, Birmingham, AL*
- WP 529 **Uncovering Changes to the Zebrafish Skeletal Muscle Proteome Induced by Hypoxia;** Kan Chen; Richard B. Cole; Bernard B. Rees; *University of New Orleans, New Orleans, LA*
- WP 530 **Quantitative Analysis of Central Nervous System Myelin by NanoUPLC-MSE;** Stefan Tenzer¹; Hauke B Werner²; Olaf Jahn²; Hansjörg Schild¹; ¹*University of Mainz, Mainz, Germany*; ²*Max Planck Institute of Experimental Medicine, Goettingen, Germany*
- WP 531 **Quantitative Proteomic Profiling Reveals a Role for miR-128 in Prostate Cancer Progression;** Arun Sreekumar¹; Amjad Khan²; Laila Poisson²; Vadiraja B. Bhat³; Rong Zhao⁴; Javed Siddiqui²; Alexey Nesvizhskii²; Gilbert Omenn²; Arul Chinnaiyan⁴; ¹*Medical College of Georgia, Augusta, GA*; ²*University of Michigan, Ann Arbor, Michigan*; ³*Agilent Technologies, Wilmington, DE*; ⁴*University of Michigan, Pathology, Ann Arbor, MI*
- WP 532 **Studying Mammalian Peroxisomes by Quantitative High Resolution Mass Spectrometry;** Sebastian Wiese¹; Thomas Gronemeyer¹; Rob Ofman²; Christian Bunse¹; Martin Eisenacher¹; Christian Stephan¹; Hans R. Waterham²; Ronald J.A. Wanders²; Helmut E. Meyer¹; Bettina Warscheid¹; ¹*Ruhr-University Bochum, Bochum, Germany*; ²*University of Amsterdam, Amsterdam, The Netherlands*
- WP 533 **MALDI-MS Analyses of Time-Dependent Changes in Tissue Protein Signals after Ethanol Fixation;** Hay-Yan J. Wang; Cheng Bin Liu; Jr Shin Kuo; Hsiao-Han Wang; *National Sun Yat-Sen University, Kaohsiung, Taiwan*
- WP 534 **A Novel Closed ESI Interface Improved LC-MRM Assays for Biomarker Verification on Large-Cell Neuroendocrine Lung Cancer (LCNEC);** Toshihide Nishimura¹; Tetsuya Fukuda²; Hiroshi Hike³; Kiyonaga Fujii⁴; Hiroko Hamasaki⁵; Masaharu Nomura¹; Yasuhiko Bando²; Norihiko Ikeda¹; Harubumi Kato¹; ¹*Tokyo Medical University, Tokyo, Japan*; ²*Biosys Technologies, Inc., Tokyo, Japan*; ³*AMR Inc., Tokyo, Japan*; ⁴*Hokkaido University, Sapporo, JAPAN*; ⁵*The University of Tokyo, Tokyo, Japan*
- WP 535 **Proteomic Profiling of *Populus trichocarpa* for the Interrogation of Molecular Mechanisms behind Wood Formation;** Taufika Islam Williams; Ying-Hsuan Sun; Ting-Feng Yeh; Jason S. Sampson; David C. Muddiman; Vincent Chiang; *North Carolina State University, Raleigh, NC*
- WP 536 **Top-Down High Resolution Electron Capture Dissociation Mass spectrometry for Characterization of Post-Translational Modifications in Mouse Cardiac Troponin;** Serife Ayaz Guner¹; Lin Li¹; Chris Doede¹; Jeffery W. Walker^{1,2}; Ying Ge¹; ¹*University of Wisconsin-Madison, Madison, WI*; ²*University of Arizona, Tucson, AZ*
- WP 537 **Proteomic Analysis of ADAM17 Metalloproteinase-Cleaved Proteins from PMA-Stimulated Human Platelets;** Karen Pei Yi Fong¹; Colin G. Barry¹; Tilo Grosser¹; Anh Tran¹; Hsin-yao Tang²; Ian A. Blair³;

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- David W. Speicher²; Lawrence Brass¹; ¹University of Pennsylvania, Philadelphia, PA; ²The Wistar Institute, Philadelphia, PA; ³Univ. of Penn/SOM/Pharmacol, Philadelphia, PA
- WP 538 **Quantitative Protein Profiling of Drosophila Parkin Null Mutants Using Stable Isotope Labeling and Label-Free Proteomics**; Zhiyin Xun¹; Thomas C Kaufman²; David E. Clemmer²; ¹UC-davis, Davis, CA; ²Indiana University, Bloomington, IN
- WP 539 **Proteomic Foray into White Rhinoceros (*Ceratotherium simum*) Horn Keratin**; Stefan Clerens; Santanu Deb-Choudhury; Anita J. Hancock; Charisa D. Cornellison; Jeff E. Plowman; Henning Koehn; Ancy Thomas; Jolon M. Dyer; AgResearch Limited, Christchurch, New Zealand
- WP 540 **Identification and Quantification of NMDA Receptor Complex Proteins in Human Postmortem Brain Tissue Samples**; Matthew L Macdonald¹; Eugene F. Ciccimaro³; Anamika Banerjee¹; Chang-gyu Hahn¹; Ian A. Blair²; ¹University of Pennsylvania, Philadelphia, PA; ²Univ. of Penn/SOM/Pharmacol, Philadelphia, PA; ³Thermo Fisher Scientific, Somerset, NJ
- WP 541 **Quantitative Proteomic Analysis of Diabetic Cardiomyopathy Using Label-free Mass Spectrometry**; Chao Yuan¹; Gregg DiNuoscio¹; Andrew Keller²; Gaurav S.J.B. Rana¹; Andrea Romani¹; Mark Chance¹; ¹Case Western Reserve Univ., Cleveland, OH; ²Rosetta Biosoftware, Seattle, WA
- WP 542 **Identification of Brain Proteins Co-Aggregated with Memapsin 2**; Xiaoman Li; Jordan Tang; Univ. of OK Health sci centr, Oklahoma City, OK
- WP 543 **GeLC-MS/MS Analysis of Rat Lens Proteins and Associated Effects From Aging/Environment**; Kyle A. Floyd; David R. Stella; Landon Wilson; Michael R. Heaven; Stephen Barnes; University of Alabama at Birmingham, Birmingham, AL
- WP 544 **Proteomic Profiling of Rat Heart Aging**; Zongming Fu¹; Chunling Fan¹; Lesley Kane¹; Marjan Gucek¹; Geoffrey Hesketh¹; Liquan Jiang²; Jing Zhang²; Mingyi Wang²; Allen Everett¹; Jennifer Van Eyk¹; Edward Lakatta²; ¹Johns Hopkins School of Medicine, Baltimore, MD; ²National Institute on Aging, Baltimore, MD
- WP 545 **Evaluation of Sample Preparation Methods for Improved Extraction of Membrane Proteins for Effective Proteomic Analysis of Small Number of Cells**; Dipak Thakur¹; Tomas Rejtar¹; Buffie Clodfelder-Miller²; Dennis Sgroi³; Barry L. Karger¹; ¹Northeastern University, Boston, MA; ²University of Alabama, Birmingham, AL; ³Massachusetts General Hospital, Charlestown, MA
- WP 546 **Quantitative Proteomic Analysis Reveals Redirection of Nuclear-Cytoplasmic Trafficking upon Avian Influenza Infection in Lung Epithelial Cells**; Eric Y. Chan; Yu Li; Michael G. Katze; University of Washington, Seattle, WA
- WP 547 **Comparison of Human Uridine Glucuronosyltransferase Enzyme Expression Levels within Human Liver, Intestine and Kidney using nanoLC Tandem Mass Spectrometry**; David Harbour¹; John Fallon¹; Shinya Ito²; Takashi Baba⁴; Joseph K Ritter³; Philip C. Smith¹; Gary L. Glish²; ¹UNC Chapel Hill, Chapel Hill, NC; ²University of North Carolina, Chapel Hill, NC; ³Virginia Commonwealth University Medical Center, Richmond, VA; ⁴Univ. North Carolina, Chapel Hill, NC
- WP 548 **Tissue Proteomics: A SILAM-Based Workflow For Targeted Differential Analysis Applied To Sleep Nuclei**; Ronald A. Miller¹; Christopher J. Winrow¹; Daniel S. Spellman¹; Rhonda R. Taylor¹; Duane R. Reiss¹; James P. Conway²; Francisco J. Dieguez-Acuna¹; John J. Renger¹; Ronald C. Hendrickson²; ¹Merck Research Laboratories, West Point, PA; ²MRL, Rahway, NJ
- WP 549 **Characterization of the Biological Effects of Naphthenic Acid Exposure on Zebrafish (*Danio rerio*) Gill Proteome using 2MEGA Stable Isotope Labeling**; Andrea G. De Souza; Tyson J. MacCormack; Andy Lo; Greg G. Goss; Liang Li; University of Alberta, Edmonton, Canada
- WP 550 **Characterization of Tubulin Isoforms in Human Tumor Tissue**; Leah M. Miller; Phyllis M. Novikoff; Susan Band Horwitz; Ruth Hogue Angeletti; Albert Einstein College of Med, Bronx, NY
- WP 551 **Proteomic Analysis of the Effect of the Gut Microbiome on Host Cells**; Xinxin Zhang¹; Nikhil Garge¹; Dallas Donohoe²; Sarah Bortvedt²; Scott Bultman²; Maureen K. Bunker¹; ¹Research Triangle Institute, Research Triangle Park, NC; ²University of North Carolina-Chapel Hill, Chapel Hill, NC
- WP 552 **Large Scale Analysis of Breast Cancer Tissue Proteomes Using an Accurate Mass and Time (AMT) Tag Approach**; V.S. Kumar Kolli¹; Tao Liu²; Brianne Petritis²; Luke Weaver¹; Brenda Deyarmin¹; Jennifer Kane¹; Richard Katenhusen¹; David Kirchner¹; Karin Rodland²; David Camp²; Richard D. Smith²; Craig Shriver³; Richard J. Murali¹; ¹Windber Research Institute, Windber, PA; ²Pacific Northwest National Laboratory, Richland, WA; ³Walter Reed Army Medical Center, Washington, DC
- WP 553 **Development of a Reproducible Sample Processing Method for Quantification of Proteins in Muscle Tissue**; Ekaterina G. Devanova¹; Zhenlian/vivian Ke²; Kevin Nennig¹; Yi Du¹; Kai Zhou¹; Francisco Dieguez²; Nathan Yates¹; Ronald Hendrickson¹; ¹Merck Research Laboratories, Rahway, NJ; ²Merck, West Point, PA
- WP 554 **Cell Type Specific Protein Cataloguing of Barrett's Esophagus: Workflow Design and Evaluation**; Christoph Stingl¹; Frederike G.I. van Vlieteren²; Coskun Guzel¹; Theo M. Luiders¹; Jacques J. Bergman²; ¹Erasmus MC, Rotterdam, The Netherlands; ²Academic Medical Center, Amsterdam, The Netherlands
- WP 555 **Mining the Human Placenta Proteome ≥ 5000 Proteins Deep Using CID/ETD on a Novel Ion Trap Mass Spectrometer**; Simone M Lemeer¹; Andrea Schneider²; Markus Lubeck³; Bernhard Kuster¹; ¹Technical University Munich, Freising, Germany; ²Bruker Daltonics, Bremen, Germany; ³Bruker Daltonik GmbH, Bremen, Germany
- WP 556 **Comparison of First-dimension Separations for "MudPIT" Proteomic Studies on Endometrial Tissue**; Steven L. Young¹; Maria Warren Hines²; Nedyalka Dicheva²; Mihaela Mocanu²; Marc Fritz¹; Scotchie Jessica¹; Carol E. Parker²; ¹Div. of Reprod. Endocrin. & Infertility, UNC-CH, Chapel Hill, NC; ²UNC-Duke Proteomics Center, UNC-CH, Chapel Hill, NC
- WP 557 **MS(E) Differential Proteomic Analysis of Archival Formalin Fixed, Celloidin Embedded Human Inner Ear Tissue**; Karin Green¹; Antti A. Aarnisalo²; Jennifer O'Malley²; Joe Adams²; Saumil N. Merchant M.D.²; James E. Evans¹; ¹U-MASS Medical School, Worcester,

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- MA; ²Mass. Eye & Ear Infirmary, Harvard Medical School, Boston, MA
- WP 558 **Quantitative Proteome Analysis of Slow and Fast Skeletal Muscle Tissue Using *in vivo* SILAC**; Marcus Krueger¹; Hannes Drexler²; Anne Konzer¹; Aaron Ruhs¹; Luca Mendler¹; Thomas Braun¹; ¹MPI for Heart and Lung Research, Bad Nauheim, Germany; ²MPI for Molecular Biomedicine, Muenster, Germany
- WP 559 **Tissue-Specific N-Glycopeptide Profiling Maps**; Carey Sheu¹; Kelly Cooke¹; David S Campbell¹; Mi-youn Brusniak¹; Simon Letarte¹; Julian D Watts¹; Ruedi Aebersold^{1,2}; ¹Institute for Systems Biology, Seattle, WA; ²ETH - Swiss Federal Institute of Technology, Zurich, Switzerland
- WP 560 **Quantitative Analysis of Proteomic Changes in Alix Knockout Mice for High-Throughput Profiling of the Regulated Protein Expression by Poorly-Characterized Proteins**; Robert Dejourne¹; Yanbao Yu¹; Oliver Bogler²; Xian Chen¹; ¹University of North Carolina, Durham, NC; ²UT M.D. Anderson Cancer Center, Houston, TX
- METABOLITE PROFILING, 561 - 582**
- WP 561 **Cell Type Classification by Phenotype Specific Markers of Live Single Cells**; Akinori Hosokawa; Naohiro Tsuyama; Hajime Mizuno; Takanori Harada; Tsutomu Masujima; *Hiroshima Univ. BioMed., Hiroshima, Japan*
- WP 562 **What Do We Learn about Hepatotoxicity Using Coumarin-Treated Rat Model?** Ming-chih D. Ho¹; Bob Xiong¹; S. Stellar²; J. Silva²; H. K. Lim²; Patrick Bennett¹; Lily Li¹; J. Proctor²; ¹Tandem Labs New England, Boxborough, MA; ²Johnson & Johnson PRD, Raritan, NJ
- WP 563 **Characterization of Metabolites in *Stachybotrys chartarum* by LC/TOF-MS**; Masahiko Takino¹; Eri Ochiai²; Katsuhiko Kamei²; Yoshiko Sugita-Konishi³; ¹Agilent Technologies, Hachioji-shi, Japan; ²Medical mycology reserach Center, Chiba University, Chiba-shi, Japan; ³National Institute of Health Sciences, Tokyo, Japan
- WP 564 **Mass Spectrometric Analysis of Metabolites in Corn (*Zea Mays*) Root by Mid-Infrared Laser Ablation Electrospray Ionization at Atmospheric Pressure**; Jennifer A Day; Peter Nemes; Akos Vertes; *George Washington University, Washington, DC*
- WP 565 **Mass Spectrometry Study of Vine Defense Mechanisms Against *Plasmopara viticola***; Gregory Hamm¹; Benoit Maunier²; Anne Poutaraud³; Vincent Carré¹; Didier Merdinoglu³; Jean Francois Muller¹; ¹LSMCL, Metz, France; ²ICOA, Orléans, France; ³INRA, Colmar, France
- WP 566 **Quantitation of Several HIV Antiretroviral Drugs in Human Plasma by LC Tandem MS**; David W. Blank; Brian J. Gilfix; Marcos DiFalco; Line Roy; Bernard F. Gibbs; *McGill University, Montreal, Canada*
- WP 567 **Comprehensive Profiling of Human Plasma Phospholipids by Combining Direct Infusion and LC FTMS**; Rachel Kozlowski; Jun Han; Christoph H. Borchers; *GBC UVic Proteomics Centre, Victoria,, Canada*
- WP 568 **Identification of Cell Cycle Specific Metabolite Profile by Single Cell Mass Spectrometry in NIH3T3 Cells**; Yuka Miho; Naohiro Tsuyama; Hajime Mizuno; Takanori Harada; Tsutomu Masujima; *Hiroshima Univ. BioMed., Hiroshima, Japan*
- WP 569 **Characterization of Methylated Flavonoid Regioisomers using Tandem Mass Spectrometry**; Chao Li¹; Feng Shi¹; Adam Schmidt²; Eran Pichersky²; A. Daniel Jones¹; ¹Michigan State University, East Lansing, MI; ²University of Michigan, Ann Arbor, MI
- WP 570 **Spatially Resolved Non-Targeted Metabolic Profiling of *Medicago truncatula* and *Medicago sativa* Border Cells**; Mohamed Bedair¹; Bonnie S. Watson¹; Ewa Urbanczyk-Wochniak²; David Huhman³; Lloyd W. Sumner⁴; ¹Samuel Roberts Noble Foundation, Ardmore, OK; ²Monsanto, St. Louis, MO; ³The Samuel Roberts Noble Foundation, Ardmore, OK; ⁴The Noble Foundation, Ardmore, OK
- WP 571 **An Unusual Mass Spectrometric Fragmentation Pattern of a Group of Sulfonyl Compounds: Beta-Elimination and Subsequent Retro-Diels-Alder Ring Opening**; Hlaing (Holly) Maw; Hongbin Yu; *Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT*
- WP 572 **Acyl CoA-Profiling in Biological Tissues Using Online SPE-LC-FTMS (Orbitrap)**; Christoph Magnes¹; Maria Suppan¹; Petra Kienesberger²; Tarek Moustafa³; Thomas Pieber^{1,3}; Frank Michael Sinner¹; ¹Joanneum Research Forschungsgesellschaft mbH, Graz, Austria; ²University of Graz, Graz, Austria; ³Medical Univ. of Graz, Graz, Austria
- WP 573 **Lipidomic Profiling of Steroid and Fatty Acid Derivatives Using High-Temperature Gas Chromatography-Mass Spectrometry**; Hyun-Jin Jung^{1,2}; Won-Yong Lee²; Bong Chul Chung¹; Man-ho Choi¹; ¹Life Sciences Division / KIST, Seoul, South Korea; ²Yonsei University, Seoul, Korea
- WP 574 **Quantitative Steroid Signatures by Gas Chromatography-Mass Spectrometry for Multiple-Substrate Enzyme Assays**; Ju-Yeon Moon^{1,2}; Hyun-Jin Jung^{1,2}; Man-ho Choi¹; Myeong Hee Moon²; Bong Chul Chung¹; ¹Life Sciences Division / KIST, Seoul, South Korea; ²Yonsei University, Seoul, South Korea
- WP 575 **Plant Gibberellins: LC-MS/MS and GC-MS for Profiling, Identification and Quantification**; Baichen Zhang¹; Leslie M. Hicks²; ¹Donald Danforth Center, St Louis, MO; ²Danforth Center, St. Louis, MO
- WP 576 **Accelerating Japanese Green Tea Quality Assessment by Ultra Fast LC-IT-TOF MS Based Profiling Studies Using High Mass Accuracy MSn Analysis**; Tairo Ogura¹; Takushi Yamamoto¹; Satoshi Yamaki¹; Tatsunari Yoshida¹; Hirohisa Mikami¹; Rui Kawahara²; Takeshi Bamba²; Eiichi Fukusaki²; ¹Shimadzu corporation, Kyoto, Japan; ²Osaka University, Osaka, Japan
- WP 577 **Quantitation of Amino Acids in Dried Blood Spots by iTRAQ®Regent Derivatization Reaction and LC/MS/MS Analysis**; Songhyun Yang¹; Jungsun Han¹; Chuljin Moon¹; Hansoon Kwon²; Sanghwa Kim²; Jim Krol³; Scott B. Daniels³; Susan Leonard³; ¹Green Cross Reference Laboratory, Yongin, South Korea; ²Applied Biosystems, Seoul, South Korea; ³Applied Biosystems I, Framingham, MA
- WP 578 **Embryonic Cell Metabolite Profiling during Neuronal Differentiation by Single Cell Mass Spectrometry**; Naohiro Tsuyama; Hajime Mizuno; Takanori Harada; Tsutomu Masujima; *Hiroshima Univ. BioMed., Hiroshima, Japan*
- WP 579 **Complementarity of Plasma Proteome and Urinary Metabolome Changes Associated with Extreme Obesity, Metformin Therapy and Bariatric Surgery**

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- WP 580 **Fast HPLC-MS Analysis of Acylcarnitines in Biological Matrices**; Paul Minkler; Stephen Ingalls; Charles Hoppel; *Case Western Reserve Univ., Cleveland, OH*
- WP 581 **Identification of Cryptorchidism in Horses by Analysing Their Urine Samples with Gas Chromatography Mass Spectrometry**; Jenny K.Y. Wong; David K.K. Leung; Francis P.W. Tang; Terence S.M. Wan; *The Hong Kong Jockey Club, Hong Kong, China*
- WP 582 **Measuring the Quantity of Gold Nanoparticles Uptake into Mammalian Cells by Mass Spectrometry**; Huan-Chang Lin¹; Hsin-Hung Lin¹; Cai-Yu Kao²; Alice L. Yu¹; Wen-ping Peng^{1,2}; Chung-Hsuan Chen¹; ¹*Genomics Research Center, Academia Sinica, Taipei, Taiwan*; ²*National Dong Hwa University, Shoufeng, Hualien, Taiwan*
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- ENVIRONMENTAL, 583 - 609**
- WP 583 **Molecular Characterization of Sea-Surface Microlayers in the Adriatic Using Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Boris P. Koch^{2,3}; Matthias Witt¹; Blazenska Gasparovic⁴; Sanja Frka⁴; Gerhard Kattner²; Christian Albers¹; ¹*Bruker Daltonik GmbH, Bremen, Germany*; ²*Alfred Wegener Institute for Polar and Marine Res, Bremerhaven, Germany*; ³*University of Applied Sciences, Bremerhaven, Germany*; ⁴*Ruder Boskovic Institute, Zagreb, Croatia*
- WP 584 **Characterization of Perfluorinated Acids by MALDI-TOF/TOF Mass Spectrometry**; Bing Guan¹; Joseph B. Ferrario²; Richard B. Cole¹; ¹*University of New Orleans, New Orleans, LA*; ²*USEPA, Stennis Space Center, MS*
- WP 585 **Rapid Analysis of Pharmaceutical Contaminants in Groundwater with Ambient Mass Spectrometry**; Ian S. Campbell; Alain Ton; Christopher C. Mulligan; *Illinois State University, Normal, IL*
- WP 586 **Fast Screening for Explosives at Ultra-High Resolution: Utilization of Simple Method Development Using a Benchtop Orbitrap Mass Spectrometer**; Josef Ruzicka; Kevin J. Mchale; Mark Sanders; *Thermo Fisher Scientific, Somerset, NJ*
- WP 587 **Dioxin Analysis by Gas Chromatography-Fourier Transform Mass Spectrometry**; Vincent Y. Taguchi¹; Ray E. Clement¹; Stefan Krolik³; Robert Nieckarz^{1,2}; Robert Williams⁴; ¹*Ministry of the Environment, Toronto, ON*; ²*University of Waterloo, Waterloo, Canada*; ³*Consultant to Varian Inc, Montreal, Canada*; ⁴*Varian Inc, Lake Forest, CA*
- WP 588 **Melamine Screening in Milk Using Low Temperature Plasma Ionization on a Portable Mass Spectrometer**; Guangming Huang; Zheng Ouyang; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- WP 589 **Combinatorial Library-Building Based on GC-MS Heartcuts and Spectral Deconvolution to Identify Alkylated PAH in Crude Oils**; Albert Robbat; Christian Zeigler; *Tufts University, Medford, MA*
- WP 590 **Determination and Reduction of the Effects of Fragment Ion Interferences in High-Resolution Environmental Analyses**; Jerry Hart; Carla Lyon; Yves Tondeur; *Analytical Perspectives, Wilmington, NC*
- WP 591 **Application of a Novel GC-MS Method for Assessing Endogenous Metabolites in Exhaled Breath Condensate**; Heidi F Hubbard; Joachim D Pleil; Jon R Sobus; Michael C Madden; *US EPA, Rtp, NC*
- WP 592 **Chemical Ionization Detection of Haloamines in Real Time Using SIFT-MS**; Murray J. Mcewan¹; John Gray²; Wan Ping Hu²; Daniel Milligan²; Vaughan Langford²; ¹*University of Canterbury, Christchurch, New Zealand*; ²*Syft Technologies Ltd, 3 Craft Pl, Christchurch, New Zealand*
- WP 593 **GC-Tandem Quadrupole Mass Spectrometry as an Alternative to High-Resolution Mass Spectrometry for the Investigation of Polychlorinated Dioxins and Furans**; Anthony Macherone; *Agilent Technologies, Elkton, MD*
- WP 594 **Comparative Evaluation of Target/Non-Target Screen and Quantitation Techniques of 250 Pesticides in Potable Water**; Peter Stone; Michael Flanagan; *Agilent Technologies, Santa Clara, CA*
- WP 595 **Pharmaceutical Contaminant Screen in Drinking Water and Surface Water by Direct Online Analysis**; Francois A. Espourteille; Catherine Lafontaine; *Thermo Fisher Scientific, Franklin, MA*
- WP 596 **Host-Guest Chemistry to Improve LC-MS Detection Limits for Pharmaceuticals Present as Pollutants in Drinking Water**; Nirmala Viswanathan; Regina Nardi; Lauren Pettit; David Sierra; Dil Ramanathan; *Kean University, Union, NJ*
- WP 597 **Wastewater Impurity Screening Coming from Large Chemical Plants Using a Combination of Polarity Switching ESI & APCI LC-MS/MS Analysis**; Markus Mickel; *Applied Biosystems, Darmstadt, Germany*
- WP 598 **LC/TOF-MS for the Analysis of Pharmaceuticals and their Degradates in Water**; Imma Ferrer; Michael Thurman; *University of Colorado, Boulder, CO*
- WP 599 **HPLC/MS/MS Characterization of a Putative New Nitrosamine Disinfection By-Product: N-Nitroso-3-Methylindole**; Jessica M. Boyd; Feng Qin; Xing-fang Li; *University of Alberta, Edmonton, Canada*
- WP 600 **LC-MS/MS Analysis of Selected Perfluorinated Alkyl Acids in Drinking Water, EPA Method 537, a Validation Study**; Jia Wang¹; Charles Neslund¹; Jonathan Beck²; ¹*Lancaster Laboratories, Lancaster, PA*; ²*Thermo Fisher Scientific, San Jose, CA*
- WP 601 **Low Femtogram Target Screening and Quantitation of Polyfluorinated Compounds (PFCs) in Food Matrices**; Peter Stone¹; Linda Cote²; *Agilent Technologies Inc, Santa Clara, CA*; ²*Agilent Technologies, Saint-laurent, QC*
- WP 602 **LC-TOF/MS and UPLC-MS/MS Methods for the Analysis of Perfluorooctanesulfonate (PFOS) and the Reduction of Matrix Interference in Complex Biological Matrices**; Mark J. Strynar¹; Amy D. Delinsky¹; Andrew B. Lindstrom¹; Shoji F. Nakayama²; Jessica L. Reiner³; ¹*U.S. EPA NERL, Durham, NC*; ²*U.S. EPA NRMRL, Cincinnati, OH*; ³*NIST Hollings Marine Laboratory, Charleston, SC*
- WP 603 **Comparison of Conventional and Low Flow LC-ESI-MS For Analysis of Free and Conjugated Estrogens in Environmental Matrices**; Jerry Tso; Diana Aga; *University at Buffalo, Buffalo, NY*
- WP 604 **Dynamic MRM Acquisition Method Optimization for UHPLC-QQQ Multi-Residue Analytical Applications**; Michael Flanagan; Bruce Wang; Harry Bunting; *Agilent Technologies, Santa Clara, CA*
- WP 605 **Multi-Target Screening of up to 500 Pesticides in a Single LC/MS Run by Exact Ion Traces**; Petra Decker¹; Marcus Macht²; Arndt Ingendoh¹; Laurie Allen³; ¹*Bruker Daltonik GmbH, Bremen, Germany*; ²*Bruker*

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- Daltonics GmbH, Bremen, Germany; ³Bruker Canada Inc., East Milton, Canada
- WP 606 **Single Step LC-MS Method for the Simultaneous Determination of Organochlorine and Phenoxy Acid Pesticides**; Giorgio Famiglini; Pierangela Palma; Elisabetta Pierini; Veronica Termopoli; Helga Truffelli; Achille Cappiello; *Università di Urbino, Urbino, Italy*
- WP 607 **The Use of MRM and MRM3 Mode for Rapid Analysis of Iodinated X-Ray Contrast Media**; Jan Lembcke¹; Birgit von Oepen²; ¹*Applied Biosystems, Darmstadt, Germany*; ²*Hamburgwasser, Hamburg, Germany*
- WP 608 **Using Bonded Silica Solid Phase Microextraction Fibers as a Screening Tool for Pharmaceuticals and Personal Care Products in Drinking Water**; Carmen T. Santasania; Katherine Stenerson; Robert Shirey; An Trinh; Craig Aurand; *Supelco/Sigma-Aldrich, Bellefonte, PA*
- WP 609 **Hyphenated Techniques as Modern Detection Systems in Ion Chromatography**; Jörg Kleimann; Stefanie Czyborra; Andrea Wille; *Metrohm AG, Herisau, Switzerland*

POLYMERS, 610 - 630

- WP 610 **Qualitative and Quantitative Determination of Cellulose Polymer Derivatives Using Size-Exclusion Chromatography and ELSD-MS Detection**; Louis-philippe Labranche¹; Audrey Tousignant³; Yves G. Leblanc²; Alain Carrier²; ¹*Sandoz, Boucherville, Canada*; ²*Sandoz Canada, Boucherville, QC*; ³*Sandoz Canada Inc., Boucherville, QC*
- WP 611 **On-Line Coupling of Liquid Chromatography at Critical Conditions with Electrospray Tandem Mass Spectrometry for the Structural Characterization of Block Copolymers**; Marion Girod; Trang N.T. Phan; Laurence Charles; *University Aix-Marseille I & III, Marseille Cedex 20, France*
- WP 612 **LC-MS of EO-PO Block Copolymers Using Ultrasonic Degradations and the Mechanism of Degradation**; Ryuichi Arakawa¹; Masanori Okabayashi¹; Takehiro Watanabe¹; Yukari Nishimoto²; Tomoyuki Ozawa³; Hideya Kawasaki¹; ¹*Kansai University, Osaka, Japan*; ²*Nippon Synthetic Chemical Industry, Osaka, Japan*; ³*Nissan Chemical Industries, Chiba, Japan*
- WP 613 **Characterization of the Physical and Chemical Networks in Filled Rubber Compounds by Pyrolysis - GC/MS**; Alesia Salberg¹; Abdulkareem Melaiye²; Ed Johnson²; Chrys Wesdemiotis¹; ¹*The University of Akron, Akron, OH*; ²*The Goodyear Tire & Rubber Company, Akron, OH*
- WP 614 **Comprehensive Two Dimensional Liquid Chromatography/Mass Spectrometric (LCxLC/MS) Analyses for Characterization of Solid Epoxy Resins**; Samir Julka; Hernan Cortes; Bob Harfmann; Bruce Bell; Andreas Schweizer-Theobaldt; Matthias Pursch; David West; Shawn Maynard; *Dow Chemical Company, Midland, MI*
- WP 615 **Characterization of Povidones in Ophthalmic Solution by GPC-ELSD / LC-MS Analysis**; Audrey Tousignant¹; Louis-philippe Labranche³; Yves G. Leblanc¹; Alain Carrier²; ¹*Sandoz Canada Inc., Boucherville, Canada*; ²*Sandoz Canada, Boucherville, QC*; ³*Sandoz, Boucherville, QC*
- WP 616 **Collision Induced Dissociation Processes in Azofunctional Oligoesters**; Cristian Peptu¹; Valeria Harabagiu²; Bogdan C. Simionescu²; Marek Kowalczyk¹; ¹*Jan Dlugosz University, Czestochowa, Poland*; ²*"Petru Poni" Institute, Iasi, Romania*
- WP 617 **Solvent Effect on the DESI Mass Spectra of Industrial Polymers and Additives**; Matthieu Loriau¹; Sandra Alves¹; Florence Churlaud²; Jean-Claude Tabet¹; ¹*University Paris VI (UPMC), Paris Cedex 05, France*; ²*Arkema - CERDATO, Serquigny, France*
- WP 618 **MALDI Characterization of Polymers Using Accurate Mass Measured Data for Accelerated Material Understanding**; Sean Bennett¹; Sucharita Dutta¹; William Nichols²; Andrew J. Hotelling²; ¹*Thermo Fisher Scientific, San Jose, CA*; ²*Eastman Kodak Company, Newark, NY*
- WP 619 **Characterization of Poly(organophosphazene)s by Mass Spectrometry Techniques**; Vincenzo Scionti; Claire Tessier; Wiley Youngs; Chrys Wesdemiotis; *The University of Akron, Akron, OH*
- WP 620 **Derivatization Strategies for Improved MALDI Mass Spectrometry of MAA-MMA Copolymers**; Rémi Giordanengo¹; Stéphane Viel¹; André Thévand¹; Laurence Charles¹; Béatrice Allard-Breton²; ¹*University Aix-Marseille I & III, Marseille Cedex 20, France*; ²*ARKEMA, Pierre-Bénite, France*
- WP 621 **Overcoming the Limitations of MALDI-TOF-MS Analysis of Polymers Using GPC-MALDI and a Hybrid Ion Trap Time of Flight MALDI MS**; Brian Feild¹; Fan Xiang²; Martin Resch³; Chrys Wesdemiotis⁴; ¹*Shimadzu, Columbia, MD*; ²*Shimadzu Biotech, Pleasanton, CA*; ³*Shimadzu Europe, Duisburg, GERMANY*; ⁴*The University of Akron, Akron, OH*
- WP 622 **Comparative Study of Fatty Alcohol Alkoxylate Copolymers Fragmentation Patterns by MALDI-MS/MS Using Low Energy and High Energy CID**; Volker Wulf¹; Martin Resch²; Oliver J. Schmitz¹; Hans-Willi Kling³; Siegmund Gaeb¹; Michaela Wirtz³; ¹*University of Wuppertal, Wuppertal, Germany*; ²*Shimadzu Europe, Duisburg, Germany*; ³*Cognis GmbH, Duesseldorf, Germany*
- WP 623 **End-Group Determination in Minor Components of Polyalkylene Glycols by MALDI-ToF Mass Spectrometry Following Preliminary Derivatization**; Roman Borisov; Nikolai Yu. Polovkov; Vladimir Zaikin; *Topchiev Institute of Petrochemical synthesis, Moscow, Russian Federation*
- WP 624 **Identification of Functional Additives in Polybutadiene by Tandem Mass Spectrometry**; David E. Dabney; Jon Janoski; Roderic P. Quirk; Chrys Wesdemiotis; *The University of Akron, Akron, OH*
- WP 625 **Quantitation of PEG Contaminants in Ethoxylated Surfactant Samples by MALDI TOFMS Using Standard Additions and Internal Standards Methods**; Scott D. Hanton²; Diane M. Henning³; Kevin G. Owens¹; Renata Szyszka¹; ¹*Drexel University, Philadelphia, PA*; ²*Air Products & Chemicals, Inc., Allentown, PA*; ³*Air Products and Chemicals, Inc., Milton, WI*
- WP 626 **Positive and Negative Mode Mass Spectrometry of Poly(electrolytes)**; Bethany Subel¹; Chrys Wesdemiotis²; ¹*University of Akron, Akron, OH*; ²*The University of Akron, Akron, OH*
- WP 627 **Mass Spectrometry of Polyethylene Glycols: Evidence of Structural And Energetic Interdependence**; Antony Memboeuf¹; Ron M.A. Heeren²; Andreas Nasioudis³; Oscar F. Van Den Brink⁴; Karoly Vekey³; Laszlo Drahos¹; ¹*hungarian Academy Of Sciences, Budapest, Hungary*; ²*FOM Inst.*

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Atomic/Molecular Phy, Amsterdam, Netherlands;

³AkzoNobel, Arnhem, Netherlands; ⁴Akzo Nobel,

Utrecht, Netherlands; ⁵Hungarian Academy of Science,

Budapest, Hungary

- WP 628 **Development of a Novel Analytical Technique for the Identification of Organic Contamination on Spaceflight-Related Substrates Utilizing a DART-TOF;** Kathleen Brooks Loftin¹; Timothy P. Griffin²; Christian A. Clausen III³; ¹NASA- Kennedy Space Center, Kennedy Space Center, FL; ²NASA, Kennedy Space Center, FL; ³University of Central Florida, Orlando, FL

- WP 629 **Characteristic Fragmentation of Polysiloxanes in Monolayer by Monoatomic and Polyatomic Ions Bombardment in ToF-SIMS;** Hye Kyoung Moon; David D. Wells; Joseph A. Gardella; *SUNY Buffalo, Buffalo, NY*

- WP 630 **Surface Analysis of Polyacetylene Thin Films by UV-LDI-FTMS;** Sasa Miladinovic¹; Valérie De Vriendt²; Scott A. Robotham³; Stéphane Lucas²; Charles L. Wilkins¹; ¹University of Arkansas, Fayetteville, AR; ²University of Namur-PMR, Namur, Belgium; ³Nebraska Wesleyan University, Lincoln, NB

HYDROCARBON AND PETROCHEMICAL, 631 - 659

- WP 631 **Matrix Optimization for the MALDI-TOF-MS Analysis of Biodiesel Components;** Casey R. Mcalpin^{1,2}; Kent J. Voorhees¹; Robert L. McCormick²; Teresa L. Alleman²; ¹Colorado School of Mines, Golden, CO; ²National Renewable Energy Laboratory, Golden, CO

- WP 632 **Working Toward a Petroleomic Analysis of Bio-oils;** Erica Smith^{1,2}; David Perdian^{1,2}; Young Jin Lee^{1,2}; ¹Department of Chemistry, Iowa State University, Ames, IA; ²Ames Laboratory- U.S. DOE, Ames, IA

- WP 633 **Characterization of Sterol Glucosides Found in B100 Biodiesels by Gas and Liquid Chromatography/Mass Spectrometry;** Ryan Shea; Rick Pauls; *BP Chemicals, Naperville, IL*

- WP 634 **MALDI-TOF MS Screening of Aged Biofuels;** Julie Herniman¹; G. John Langley¹; Tom Lynch²; ¹University of Southampton, Southampton, UK; ²BP Castrol Global Lubricants Technology, Pangbourne, UK

- WP 635 **Biodiesel Identification: Distinguishing individual Fatty Acid Methyl Esters and Identifying Oxidation Products Using MS Coupled to Chromatographic Techniques;** Christianne Wicking¹; G. John Langley¹; Tom Lynch²; ¹University of Southampton, Southampton, UK; ²BP Castrol Global Lubricants Technology, Pangbourne, UK

- WP 636 **Identification of Oxidation Products of Biodiesel under Accelerated Oxidation Condition;** Jungju Seo¹; Myung Hee Nam¹; Manhoi Hur³; Jae-Kon Kim²; Mi-Jin Lee¹; ⁴Korea Basic Science Institute, Seoul, South Korea; ²Korea Institute of Petroleum Quality, Ochang-eup, Korea; ³BNF Technology Inc, Daejeon, Korea

- WP 637 **Analysis of Carbohydrates and Lipids in Microalgal Biomass Samples with HPAEC-MS and LC/MS;** Linda Lopez¹; Ting Zheng¹; Rodney Corpuz²; Rosanne Slingsby¹; Srinivasa Rao¹; ¹Dionex Corporation, Sunnyvale, CA; ²General Atomics, San Diego, CA

- WP 638 **Ionization Techniques and Reagents for Improved Heteroatom Speciation in Crude Oils by Ultrahigh Resolution FT-ICR MS;** Priyanka Juval^{1,2}; Amy McKenna⁴; Ryan P. Rodgers³; Alan G. Marshall⁵; ¹Nalco Company, Sugar Land, TX; ²Nat'l High Magnetic Field Laboratory, Tallahassee, FL; ³Nat'l High Magnetic

Field Lab, Tallahassee, FL; ⁴Natl High Magnetic Field Laboratory, Tallahassee, FL; ⁵Ion Cyclotron Resonance Prog, Tallahassee, FL

- WP 639 **Identification, Characterization and Quantitation of Vanadyl Porphyrins in Heavy Crude Oil by FT-ICR Mass Spectrometry;** Ryan P. Rodgers¹; Jeremiah M. Purcell²; Amy McKenna¹; Alan G. Marshall¹; ¹Nat'l High Magnetic Field Laboratory, Tallahassee, FL; ²Shell Global Solutions, Houston, TX

- WP 640 **Exploring Solvent and Concentration Effects on Average Molecular Weight (MW) Data for Petroleum Samples using Electrospray Ionization Mass Spectrometry (ESI-MS);** Melisa Clements; Thomas Oldenburg; Steve Larter; *PRG, University of Calgary, Calgary, Canada*

- WP 641 **Identification of Chemical Components in Shale Oils by ESI and APPI Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Eun Suk Park¹; Jeol Geol Na²; Soo Hyun Chung²; Manhoi Hur⁴; Hojoon Seo⁴; Sunghwan Kim³; Young Hwan Kim¹; Jong Shin Yoo¹; ¹Korea Basic Science Institute, Chungwon-kun, Chungbuk-do, South Korea; ²Korean Institute of Energy Research, Daejeon, South Korea; ³Korean Basic Science Institute, Ochang-myun, SOUTH KOREA; ⁴BNF Technology Inc., Daejeon, South Korea

- WP 642 **Isolation and Characterization of Naphthenic Acids in Crude Oils by Electrospray Ionization FT-ICR Mass Spectrometry;** Mmili Myles Mapolelo¹; Ryan P. Rodgers²; Alan G. Marshall³; ¹Florida State Univ, Dept of Chemistry, Tallahassee, FL; ²Nat'l High Magnetic Field Lab, Tallahassee, FL; ³Ion Cyclotron Resonance Prog, Tallahassee, FL

- WP 643 **Analysis of Fresh and Used Lubricating Oils Using ASAP in Conjunction with Ion Mobility Mass Spectrometry;** Hilary J. Major¹; Martin Selby²; Martin Green¹; Alistair Wallace¹; ¹Waters Corporation, Manchester, UK; ²Shell Global Solutions (UK), Chester, UK

- WP 644 **Identification of Low Abundant Impurities in Gas Oil by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Matthias Witt; Jochen Friedrich; *Bruker Daltonik GmbH, Bremen, Germany*

- WP 645 **The Effect of Operating Conditions on Petroleum Analysis by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Haiyan Wang; Gil Jones; Matthew Unterfenger; Victor Kovar; Howard Greenberg; Hung Pham; Stella Cabanban; Paul Adams; Andrzej Ringwelski; *UOP LLC, A Honeywell Company, Des Plaines, IL*

- WP 646 **G geochemical Applications of Electron Ionization GC-MS with Supersonic Molecular Beams;** David A. Zinniker¹; Pierre Metzger²; J. Michael Moldowan¹; Alexander B. Fialkov³; Aviv Amirav⁴; ¹Stanford University, Stanford, CA; ²Ecole Nationale Supérieure de Chimie de Paris, Paris, France; ³Tel Aviv University, Tel Aviv, ISRAEL; ⁴Tel-Aviv University, Tel-aviv, ISRAEL

- WP 647 **Element Speciation in Petroleum and Petroleum Products by HPLC-ICP MS;** Guilhem Caumette^{1,2}; Charles-Philippe Lienemann¹; Isabelle Merdrignac¹; Brice Bouyssiere²; Ryszard Lobinski²; ¹IFP - Lyon, Vernaison, France; ²LCABIE - CNRS UMR 5254, Pau, France

- WP 648 **Development of an Analytical Protocol to Investigate Solid Well Bore Deposits: Determination of Heterocyclic Compounds by FT-ICR MS;** Saroj

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- WP 649 **Investigations into Asphaltene Molecular-Mass Distribution and Plasma-Phase Aggregation Using Two-Step Laser Mass Spectrometry and LDI-MS;** Amy L. Morrow¹; Andrew E. Pomerantz²; Matthew R. Hammond¹; Oliver C. Mullins²; Richard N. Zare¹; ¹Stanford University, Stanford, CA; ²Schlumberger-Doll Research, Cambridge, MA
- WP 650 **GCxGC TOF MS and Electrospray FT-ICR-MS Identification of Asphaltene Precipitate Components - Understanding Water-In-Oil Emulsion Stability;** Brendan F. Graham²; Eric F. May²; Robert Trengove¹; ¹Murdoch University, Murdoch, Australia; ²University of Western Australia, Crawley, Australia
- WP 651 **Evidence of Paraffin Trapping by Asphaltenes Detected by LDI TOF MS;** Brice Bouyssiere³; Socrates Acevedo¹; Ryszard Lobinski³; Josmelith M. Cordero T. ¹; Hervé Carrier²; ¹Universidad Central de Venezuela, Caracas 1053, Venezuela; ²Laboratoire des Fluides Complexes, Université de Pau, Pau, France; ³LCABIE - CNRS/UPPA UMR 5254, Pau, France
- WP 652 **Observation of Fullerenes from PAH's in MALDI TOF;** Robert E. Haufler²; Alexandre Loboda²; L. P. Felipe Chibante¹; Brad McCann¹; ¹University of New Brunswick, Fredericton, Canada; ²MDS Analytical Technologies, Concord, Canada
- WP 653 **REMPI Measurements of Aromatics in Hydrocarbon Model Flames;** Tina Kasper; Nils Hansen; Sandia Nat. Labs., CRF, Livermore, CA
- WP 654 **Compositional Analysis of Petroleum Distillation Residue by APCI FT-ICR Mass Spectrometer;** Eunkyoung Kim^{1,1}; Myoung-han No^{1,2}; Jaesuk Koh^{1,2}; Sunghwan Kim^{1,3}; Manhoi Hur^{1,4}; ¹Daejeon, South Korea; ²SK energy Institute of Tech., Daejeon, South Korea; ³Korean Basic Science Institute, Ochang-myun, South Korea; ⁴BNF Technology, 556, Youngsan-dong, Yuseong-gu, Daejeon, South Korea
- WP 655 **Molecular Analysis of a Coal Liquefaction Product by FT-ICR/MS – Comparison of ASAP, ESI, APCI and APPI Ionization Techniques;** Jeremie Ponthus; Lyes Assam; Institut Français du Pétrole, Solaize, France
- WP 656 **What Color Is Your Fuel Spill? Solvent Dyes in Fuels and Fuel Spill Samples by Electrospray Ionization Mass Spectrometry;** Colleen Rostad; USGS, WRD, NRP, Lakewood, CO
- WP 657 **The Petroleome: A Mass Spectral Database of Petroleum Composition;** Jade Velasquez^{1,3}; Amy McKenna^{1,2}; Ryan P. Rodgers^{1,2}; Alan G. Marshall^{1,2}; ¹Natl High Magnetic Field Laboratory, Tallahassee, FL; ²Department of Chemistry and Biochemistry, FSU, Tallahassee, FL; ³Florida State University, Tallahassee, Florida
- WP 658 **Statistical Interpretation of Crude Oil High Resolution Spectra Obtained by ESI and APPI FT-ICR Mass Spectrometry Using Principal Components Analysis;** Manhoi Hur¹; Somi Shin¹; Hojoon Seo¹; InJoon Yeo²; Eun Suk Park²; Eunkyoung Kim³; Myoung-han No³; Young Hwan Kim²; Sunghwan Kim²; ¹BNF Technology Inc., Daejeon, South Korea; ²Korea Basic Science Institute, Chungwon-kun, Chungbuk-do, South Korea; ³SK energy Institute of Tech., Daejeon, South Korea
- WP 659 **The Analysis of Mass Spectra in Petroleomics – A Novel Application for Machine Learning;** Jennifer Hauschild; Hugh Cartwright; University of Oxford, Oxford, UK
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- WP 660 **Structural Characterization of Gas-phase Uranyl Trihalide Anions Using IRMPD Spectroscopy;** Gary Groenewold²; Michael Kullman¹; Ryan Dain¹; Jos Oomens³; Jeffrey Steill³; Michael J. Van Stipdonk¹; ¹Wichita State University, Wichita, KS; ²Idaho National Laboratory, Idaho Falls, ID; ³FOM Rijnhuizen, Nieuwegein, Netherlands
- WP 661 **Measuring Infrared “Fingerprint” Spectra of Gas-Phase Zwitterions Using a Continuous Wave OPO Laser;** Warren K. Mino Jr.; Jan Szczapanski; David H. Powell; John R. Eyler; Nicolas Polfer; University of Florida, Gainesville, FL
- WP 662 **IRMPD Spectroscopy Investigation of Gas-Phase Sodium and Potassium Chlorate Anions;** Ryan P. Dain¹; Christopher M. Leavitt¹; Jos Oomens²; Jeffrey Steill²; Gary Groenewold³; Michael J. Van Stipdonk¹; ¹Wichita State University, Wichita, KS; ²FOM Rijnhuizen, Nieuwegein, Netherlands; ³Idaho National Laboratory, Idaho Falls, ID
- WP 663 **Photoelectron Spectroscopy of Substituted Phenyl nitrenes;** Neloni Wijeratne; Paul G. Wenthold; Purdue University, West Lafayette, IN
- WP 664 **Potassium Affinity of Gas-Phase Amino Acids Determined by IRMPD (CO₂- and Free Electron Laser) and Molecular Modeling;** Miriam Drayss¹; Frank Dreiocker¹; Dirk Blunk¹; Jeremiah M. Purcell³; Chris Hendrickson^{2,6}; Alan G. Marshall^{2,6}; Jos Oomens⁴; Abhingya Mookherjee⁵; Peter B. Armentrout⁵; Mathias Schaefer¹; ¹Inst. Organic Chemistry University of Cologne, Cologne, Germany; ²Ion Cyclotron Resonance Prog, Tallahassee, FL; ³Shell Global Solutions, Houston, TX; ⁴FOM Rijnhuizen, Nieuwegein, Netherlands; ⁵University of Utah, Salt Lake City, UT; ⁶National High Magnetic Field Laboratory, Tallahassee, FL
- WP 665 **Chain Length and Sequence Effects on Metal-Ion Peptide Binding Conformations. IRMPD Spectroscopic Exploration;** Robert C. Dunbar¹; Jeffrey Steill²; Nicolas Polfer³; Jos Oomens²; ¹Case Western Reserve Univ, Cleveland, OH; ²FOM Rijnhuizen, Nieuwegein, Netherlands; ³University of Florida, Gainesville, FL
- WP 666 **The Structure of (M+H-H₂O)⁺ Generated from Protonated Tetraglycine Revealed by Tandem MS and IRMPD Spectroscopy;** Michael J. Van Stipdonk¹; Benjamin Bythell²; Ryan Dain¹; Jos Oomens³; Jeffrey Steill³; Gary Groenewold⁴; Bela Paizs⁵; ¹Wichita State University, Wichita, KS; ²German Cancer Research Center, Heidelberg, Germany; ³FOM Rijnhuizen, Nieuwegein, Netherlands; ⁴Idaho National Laboratory, Idaho Falls, ID; ⁵DKFZ, Heidelberg, Heidelberg, Germany
- WP 667 **Structure and Fragmentation Behavior of Metal-Cationized Phosphopeptides;** Sarah M. Young¹; Sam Molesworth¹; Jeffrey Steill²; Ryan Dain¹; Jos Oomens²; Gary Groenewold³; Michael J. Van Stipdonk¹; ¹Wichita State University, Wichita, KS; ²FOM Rijnhuizen,

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- WP 669 **Characterization of the Conformations of Gas-Phase Peptide Ions via Acid-Base Measurements: A Study of Ion Internal Solvation**; Jianhua Ren; Kiran Kumar Morishetti; Robert Harper; John Tan; Betty Huang; *University of the Pacific, Stockton, CA*
- WP 670 **Structure and Behavior of Mixed Serine Clusters: Molecular Dynamics, Post-Hartree Fock and Density Functional Theory Studies**; Anthony Costa; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- WP 671 **Conformational and Thermochemical Properties of Deprotonated Amino Acid Clusters from High Pressure Mass Spectrometry**; Robert J. Niecekarz¹; Chad G. Atkins²; Opal Courtney¹; Terry McMahon¹; ¹*University of Waterloo, Waterloo, Canada*; ²*Memorial University, St Johns, Canada*
- WP 672 **Mechanisms of Characteristic Phospholipid Anion Fragmentations: Theoretical Study II**; Daryl Giblin; Fong-Fu Hsu; John Turk; Michael L. Gross; *Washington University, St Louis, MO*
- WP 673 **Mobile Protons and Mobile Radicals: Insights from Time- and Collision Energy-Resolved Surface-Induced Dissociation Studies**; Julia Laskin¹; Zhibo Yang²; Ngor Wai Lam³; Ivan K. Chu⁴; ¹*Pacific NW National Laboratory, Richland, WA*; ²*University of Colorado at Bo, Boulder, CO*; ³*HKU, Hong Kong, Hong Kong*; ⁴*University of Hong Kong, Hong Kong, Hong Kong*
- WP 674 **Determination of the Binding Energy of Benzene-Water Cluster**; Laura Haupt; Paul G. Wenthold; *Purdue University, West Lafayette, IN*
- WP 675 **Double Hydrogen Transfer on Unimolecular Dissociation for N-(2-Indancarbonyl)-1-azacycloalkan(e)-2-(thio)one Derivatives Including Deuterium Labeled Ones Using a Four Sector Tandem Mass Spectrometer**; Hiroshi Yamaoka¹; Kazuo Fujii¹; Rie Uemura¹; Kimio Isa²; Ryuji Nakata²; Tetsuya Maekawa²; Nico M.M. Nibbering³; ¹*Osaka Prefecture University, Sakai, Osaka, Japan*; ²*University of Fukui, Fukui, Japan*; ³*Vrije Universiteit, Amsterdam, The Netherlands*
- WP 676 **Selective Bond Breaking in Prompt and Metastable Decay of Deprotonated Monosaccharides – the Role of Intramolecular Vibrational Redistribution**; Oddur Ingolfsson; Ilko Bald; *University of Iceland, Reykjavik, Iceland*
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- WP 679 **Efficient Validation and Qualification of Mass Spectrometry Systems in a GLP- and GMP-Regulated Environment**; Cynthia A. Palmer¹; Douglas James²; Mario Rocci²; ¹*FDA, Philadelphia, PA*; ²*Prevalere Life Sciences, Inc., Whitesboro, NY*
- WP 680 **Making a Spectrum Viewer with Microsoft's Windows Presentation Foundation**; Tom Patterson; *nScan, Medford, MA*
- WP 681 **Bayesian Tools for Mapping Accurate Mass Measurements to Elemental Formulae**; Philip C. Price¹; Megan E. Price³; Daniel O. Price²; ¹*The Dow Chemical Company, South Charleston, WV*; ²*Fellow, American Statistical Assoc., Jacksonville, FL*; ³*The Benetech Initiative, Palo Alto, CA*
- WP 682 **Is Wikipedia the Public Face of Mass Spectrometry?** Thabiso Musapelo; Kermit K. Murray; *Louisiana State Univ., Baton Rouge, LA*
- WP 683 **An Improved Calibration Method for the MALDI-FTICR Analysis of ¹⁵N-Metabolically Labeled Proteome Digests Using a Mass Difference Approach**; LiJing; Jon Amster; *University of Georgia, Athens, GA*
- WP 684 **Image Enhancement with Constraints in the Input Space for ToF/DL Imaging Mass Spectrometry**; Andriy Kharchenko; Leendert Klerk; Ron Heeren; *FOM Institute for Atomic and Molecular Physics, Amsterdam, Netherlands*
- WP 685 **Open Access Tables of Accurate Precursor Ion Mass Values for Mass-Based Classification (MBC) of Chemical Compounds**; Bernhard Spengler; Alfons Hester; *University of Giessen, Giessen, Germany*
- WP 686 **The IUPAC International Chemical Identifier and Mass Spectrometry**; Peter J. Linstrom¹; Steve R. Heller¹; Alan D. McNaught²; Yuri A. Mirokhin³; Stephen E. Stein¹; Dmitrii V. Tchekhovskoi¹; ¹*NIST, Gaithersburg, MD*; ²*IUPAC, Research Triangle Park, NC*; ³*KT Consulting, Antioch, CA*
- WP 687 **Scalable Data Management on a High Throughput MALDI TOF Mass Spectrometer**; George Mills; Matthew Gabeler-lee; *Virgin Instruments Corporation, Sudbury, MA*
- WP 688 **Simulation of Ion Transport from Atmospheric Pressure through Intermediate Pressure to Vacuum**; Peter Williams; *Agilent Laboratories, Santa Clara, CA*
- WP 689 **Mass++ is a Plug-In Type Universal Freeware for Viewing and Manipulating Large Scale LC/MS Data**; Satoshi Tanaka¹; Ken Aoshima^{1,2}; Yuji Miura^{1,2}; Yoshiya Oda^{1,2}; ¹*CREST, Saitama, Japan*; ²*Eisai Co., Ltd, Tsukuba, Japan*
- WP 690 **Automated Classification of Unknown Biocompounds Using Tandem MS**; Sebastian Böcker; Thomas Zichner; Florian Rasche; *Friedrich-Schiller-University Jena, Jena, Germany*
- WP 691 **Optimized Data Compression Strategy for Efficient Storage and Analysis for High Throughput Multidimensional Separations and Mass Spectrometry**; Nathaniel Beagley; Chad Scherrer; Yan Shi; Brian H. Clowers; William F. Danielson; Anuj Shah; Anoop M. Mayampurath; Gordon Anderson; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- WP 692 **A Peptide Mass Fingerprinting Approach to Enhance Protein Sequence Coverage Using High Mass Accuracy MS1 Spectra**; Yunhu Wan; Stefani Thomas; Zhongping Liao; Sarah Rnyarzewski; Nandakumar Madayiputhiya; Noble Nemieboka; Austin Yang; *University of Maryland, Baltimore, MD*
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- WP 678 **Sub-Part-Per-Million Mass Accuracy Using a Single Internal Calibrant on an Orbitrap Mass Spectrometer for Large-Scale Protein Analysis**; Craig D. Wenger; Graeme C. McAlister; Qiangwei Xia; Joshua J. Coon; *University of Wisconsin, Madison, WI*

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- WP 694 **Automated Identification of Fragments via Rigorous Statistical Modelling of LC-MS Metabolomic Data;** Andreas Ipsen; Elizabeth J Want; Timothy M Ebbels; *Imperial College London, London, UK*
- WP 695 **Directed Sample Interrogation Utilizing an Accurate Mass Exclusion-Based Data-Dependent Acquisition Strategy (AMEx);** Emily Rudomin²; Steven A. Carr²; Jacob D. Jaffe¹; ¹*The Broad Institute of Ha, Cambridge, MA*; ²*Broad Institute, Cambridge, MA*
- WP 696 **A High Throughput LC/MS/MS Data Analysis Approach for Discovery PK and in-vitro Bio-Analysis;** Mei Foong Hwang; Monica Wu; Mark Gao; Quincey Wu; *XenoPort, Inc., Santa Clara, CA*
- WP 697 **The Protein Information and Property Explorer: a Rich-Client Web Application for the Management and Functional Exploration of Proteomic Data;** Hector Ramos¹; Paul Shannon¹; Ruedi Aebersold^{1,2}; ¹*Institute for Systems Biolog, Seattle, WA*; ²*Swiss Federal Institute of Technology, Zurich, Switzerland*